Journal of Medical English Education

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第22回 日本医学英語教育学会 学術集会 開催案内

日本医学英語教育学会は1998年に第1回医学英語教育研究会が開催され、その後、医学英語に関する研究を推進し、医学英語教育の向上を図る目的で学会として発展して参りました。現在では400名以上に及ぶ会員を有しております。

医学英語教育は卒前・卒後・生涯教育として重要であり、医療の国際化、医師国家試験の英語問題導入や医学英語検定試験など、専門職教育の限られた時間でどのように教育を行うかが課題です。学術集会では特に、医療系の英語教育に係わる教員・研究者・医療関係者が参加し研究・事例を報告します。第22回学術集会は下記により開催します。今回は、東京で7月18日15時より、に出展されます。参加を募集しております。日本医学教育学会の委員会に起因をもって本会会員に是非ご参加いただき、医学英語教育について情報を交換していただいてもと思います。

記

学会名：第22回日本医学英語教育学会学術集会
日 時：2019年8月3日（土）～4日（日）
会 長：五十嵐裕章（北陸総合病院）
会 場：中野サンプラザ（〒164-8512 東京都中野区中野4-1-1）
演題募集：2019年1月18日正午～3月15日正午
　（国際的交流活動、医療と医学英語、USMLE対策、医学英語適成度評価、医学英語教育における新たな取り組み、JASMEの今とこれから、その他）
＊筆頭演者は本学会の会員に限ります。非会員の方は演題提出前に入会してください。
＊英語・日本語どちらでも発表できます。学会ホームページよりご登録ください。
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＊学会ホームページ：http://www.medicalview.co.jp/JASMEE/gakujutu.shtml

問い合わせ先：日本医学英語教育学会事務局
　〒162–0845 東京都新宿区市谷本村町2–30 メジカルビュー内（担当：藤原）
　TEL 03–5228–2274 FAX 03–5228–2062 E-MAIL jasmee@medicalview.co.jp
First Announcement

The 22nd Academic Meeting of the Japan Society for Medical English Education

The Japan Society for Medical English Education (JASME) held its first meeting as a study group in 1998. Since then, the society's main aims have been to promote research in fields related to medical English, and to support and encourage improvements in medical English education. JASME now has more than 400 members.

With the globalization of medicine and such recent developments as the introduction of questions in English in Japan's National Medical Practitioners Qualifying Examination, the challenge of how best to make use of the limited time available for medical English education in university curricula is ever more pressing. JASME's annual academic meetings seek to address this challenge with a wide variety of presentations, symposia, and workshops given by experts in the field.

Information about the 22nd JASME academic meeting is presented below. The meeting in August 2019 will be held at Nakano Sunplaza, just in front of JR Nakano station, which is one of the most easily accessible places in Tokyo. We look forward to welcoming JASME members and non-members alike to this meeting, where they will be able to share their experiences and expertise with others in the field to the greater benefit of medical English education in Japan and beyond.

Dates: Saturday August 3 and Sunday August 4, 2019
Venue: Nakano Sunplaza
4-1-1Nakano, Nakano-ku, Tokyo 164-8512
President: Hiroaki Igarashi
(Kawakita General Hospital)

Call for papers: Proposals for papers on the following subjects (or similar) should be submitted by March 15, 2019.

- International Exchange Programs
- Medical English in Clinical Settings
- USMLE Preparation
- Evaluation of the Proficiency in Medical English
- New Developments in Medical English Teaching
- JASME-Now and in the Future
- Any Other Topics

Submissions will only be accepted from JASME members in good standing. To submit a proposal, please access the JASME homepage (http://www.medicalview.co.jp/JASMEE/gakujutu.shtml).

Inquiries should be addressed to the JASME Secretariat (c/o Medical View, Attn: Mr. Fujiwara)
TEL 03–5228–2274 FAX 03–5228–2062
E-MAIL jasmee@medicalview.co.jp
# Journal of Medical English Education

The official journal of the Japan Society for Medical English Education

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Editor’s perspectives

2018 Academic Meeting proceedings

Thanks are due to the President of JASME’s 21st Academic Meeting, Professor Ikuo Kageyama of the Nippon Dental University School of Life Dentistry at Niigata, for hosting a splendid conference on his institution’s Tokyo campus. This took place over the weekend of 28th and 29th July during a brief but welcome respite to this year’s particularly scorching summer heat occasioned by the arrival of Typhoon Jongdari in Tokyo!

In line with custom, a large part of this issue is devoted to a conference proceedings section, and we are grateful to the authors of the 12 papers published herein for their contributions to this section. Several other presenters at this year’s conference have been in touch to say that they mistook or simply missed the deadline for submitting papers for publication in the conference proceedings section of the October issue. I told them that they are welcome to submit papers in time for publication in the February issue, which means by the end of December. Other presenters in the same situation are equally welcome to submit papers.

In addition to the conference proceedings section, this issue features three original articles on medical English teaching practice at medical schools in Japan. Again, we are grateful to the authors for sharing their experiences and expertise with us.

And finally, a plea to all of you to keep the papers coming in. Ours is a small academic society with a rather narrower focus than most, but it is also an association of people engaged in a newer and more experimental field than most. There is wide scope for further innovation in medical English teaching, which means that there must also be a wide range of material suitable for submission to JMEE! While encouraging you to write, I would also like to remind you to refer to our guidelines for authors (http://www.medicalview.co.jp/jmee/authorguidelines/jmee_author_guidelines2014v3.pdf) when preparing papers. All submissions are reviewed by other JASME members, and I know that they prefer to spend their valuable time focusing on content rather than on formatting errors. I would also encourage you to have your papers read and commented on by friends or colleagues before submitting them to us, as this is also likely to be beneficial in the review process.

Timothy D. Minton
Editor-in-Chief
Journal of Medical English Education
1. Introduction

1.1 Nomenclature

In this paper I have used the term clinical ‘case presentations’. Similar speech events are also often called ‘case reports’, which generally represent more truncated versions, and ‘grand rounds’, which tends to refer to more formalized and adjudicated routines. Hereafter, the term ‘clinical case presentation’ will be abbreviated to ‘CP’.

1.2 Genre and speech event analysis

Since CPs are specialist speech events that require some degree of genre analysis to understand fully, I will begin by offering a brief overview of genre analysis as practiced in specialist discourse analysis.

Generic norms depend upon a shared set of speech event communicative purposes.¹ Linguistic genre analysis has been informing both language teachers and language users about the normative management of specialist discourses over the past thirty years, particularly since templates for investigating how discourse within particular genres or domains is managed were first produced and widely applied.² In specialized fields, such as medicine, the analysis of particular key speech events and, further, codifying the underlying or canonical structures that inform them have been increasing as English for Specific Purposes (ESP) has advanced into the mainstream of English teaching.³

The analysis of specific genres has been described as a social construct that regulates speech behavior among members of a discourse community.⁴ Speech genres within a specialist discourse community may not be entirely fixed but nonetheless enable interactions to become systematic.⁵ This analysis has since been expanded to include extra-textual, socio-pragmatic, ethnographic, and socio-cognitive features of discourse.⁶ Knowledge of such forms is considered essential in the construction and/or performance of narrative clin-
ical speech events, such as CPs. Such specific ‘situatedness’ has been highlighted as a central principle of genre knowledge.

The analysis of specific speech events can be conducted using either or both of bottom-up and top-down approaches. For example, at the microscopic level, one can first note syntactical choices and then proceed to observe the ways in which these choices impact the overall performance of the speech event. The opposite approach involves noting rhetorical moves made by the speakers, thereby illuminating the higher structure of the discourse, before noting their realization in lexical and syntactical forms. In this study, I have largely utilized the latter approach.

This type of generic analysis of particular speech events typically aims to identify features such as standardized openings, modes of turn-taking, the use and management of discourse markers or other rhetorical shift indicators (moves), organizational or prioritization structures, the use of specialist or formulaic lexia, and summative formulae. Further, the nature and relationship of the participants, primary speakers (or agents/interactants), degree of formality, physical settings/environment, and discourse goals/outcomes/purposes are also typically entered into the analysis.

Although some linguistic analysis of clinical history taking as a generic clinical speech event has been carried out, much less has been done regarding CPs. Among the more interesting claims and findings in the literature is that CP models should be derived from the analysis of actual expert speech and also be sympathetic to the national/cultural/institutional characteristics marking the speech, as opposed to developing a singular synoptic model based upon pre-conceived notions of effective speech models.

Most published research on CPs has focused upon mnemonic or assessment models, rather than its inherent structure or features. For example, in Japan, the ‘Vague, Structured, Organized, Pertinent’ (VSOP) model has been proposed as a viable means of assessing young clinician CPs in order to both evaluate and enhance their reasoning abilities. It could be argued that the paucity of research on CPs is due to the vertical (clinician-patient) nature of history-taking, which is more accessible and relevant to non-clinical researchers since they, quite naturally, have experienced medical discourse almost exclusively from the viewpoint of a patient.

CPs, on the other hand, are generally horizontal (clinician-clinician) speech events that non-specialists are normally not privy to. One mitigating factor in this horizontal dimension may be the presence of adjudicators or senior clinicians who attend in order to critique CPs but, even when this factor is taken into account, this speech event is still being conveyed between specialists.

CPs are also distinct from history taking from an epistemological perspective, with the former being performed post-experience, as opposed to the latter’s a priori perspective. That is, in the case of CPs, the clinician already knows where the clinical focus should be, whereas in history taking it is the clinician’s duty to discover the focal point by using interviewing skills performed in collaboration with the patient, demanding a more comprehensive perspective from which certain diagnoses may gradually be ruled out. CPs are, in short, more predictable in terms of form and structure, proceeding as narrative monologues with peer audiences, whereas history taking is inherently unpredictable, power differentiated, dialogic, and follows an interview structure.

The practice of performing CPs is nearly universal in research-based or university-affiliated hospitals and a good number of those performed in non-Anglophone countries are carried out in English. These events are conducted in English because English has become established as the Lingua Franca of medicine. Therefore, CPs can serve as a means of training in foreign language skills for resident clinicians, particularly those who might be presenting at international conferences or writing research papers in the near future, where English often serves as the only significant medium.

However, another benefit of practicing and performing CPs may be posited. That is, the process of organizing, prioritizing, categorizing, and analyzing clinical cases in a foreign language may actually aid in the holistic development of learner cognition of clinical content, even in the learners’ first language. Thus, I will also advance the argument that performing CPs in English can have a potentially positive backlash onto the non-native English speaker or participants’ general clinical skills and/or workplace practice.

1.3 Research proposal and research questions

In a successful application for a Grant-in-Aid for Scientific Research provided by the Japanese Ministry of Education, Culture, Sports, Science and Technology, I proposed the following research questions regarding CPs:

- Is there a canonical form of an English clinical or generic CP template that is used by non-native English-speaking doctors in the Asian region?
- If so, what are its prominent or significant features?
- How are these speech events usually managed?
- Which elements are transferable or interchangeable and according to what parameters?
- Are there local features or forms that are unique to a department/region or other qualities that might aid
non-native speakers of English?

· What features of CPs should be highlighted in EMP teaching?

## 2. Research methods

In order to gain sufficient, representative data on CPs I visited five universities and/or affiliated hospitals in the East Asian region from November 2017 to May 2018. These were (in order of visit):

1. Brawijaya University, Malang, Indonesia (Saiful Anwar Hospital)
2. Prince of Songkla University, Hat Yai, Thailand (University Hospital)
3. National Cheng Kung University, Tainan, Taiwan (University Hospital)
4. Thammasat University, Bangkok, Thailand (University Hospital)
5. Hanoi Medical University, Hanoi, Vietnam (University Hospital)

Full informed consent was obtained at all facilities and from all participants.

These locales were chosen primarily for two reasons. One was because of the prevalence of English-competent clinicians at these hospitals. The second was that these institutions are located in regions in which English has no official or post-colonial language status. Such non-native English modes of clinical discourse, I believe, may better serve as a realistic model for Japanese medical students and clinicians.

While visiting these universities and affiliated hospitals I observed a total of thirteen English CPs delivered by clinicians from eight different medical departments. I made notes on the formulas, protocols, and frameworks of the CPs used by the speakers in all cases and recorded the presentations in six of the thirteen cases. Significant or distinctive markers of the CPs, such as order of data, prioritization, discourse signaling, lexical choices, use of abbreviations, and formulaic language were particularly noted.

At these institutions I further interviewed individual clinicians (total n=21), medical English language teachers (n=6), upper-grade or graduate-level medical students (n=7), and administrators/departamental chiefs (n=5) regarding the teaching/learning of CP English, its role or function in the university or clinical workplace, and any peculiarities I had noted regarding the local management of CPs. Of these twenty-one interviews, twelve were recorded. In four of these interviews, I was also supplied with copies of printed forms or templates that were used by clinicians to structure their CPs.

From these notes, recordings, and written templates, both common and idiosyncratic features of CPs were noted. By noting the common features, I was able to establish a loose canonical form of a standard CP. By further noting the idiosyncratic, localized, and incongruous elements, I was also able to establish a number of conditions, considerations, and alternative structures that add flexibility and adaptability to the canonical form. These are discussed in turn below.

## 3. Results

### 3.1. The canonical form of a clinical case presentation

Based on my notes and observations from the CPs I attended, plus the subsequent interviews with clinicians regarding the structure of their own CPs, a generic clinical CP template could be said to include the following categories:

· ID (basic patient data)
· Chief Complaint
· HPI (History of Present Illness)

This includes the mnemonic sequence known as OPQRST — onset, provoking factors, quality, region + radiation, severity, and time (including duration, length per episode, frequency, and occurrence patterns), as well as associated symptoms and risk factors/complications.

· PMH (Past Medical History)

This includes surgeries, hospitalizations, underlying conditions, and trauma/injuries

· Current medications/allergies/treatments
· FH (Family History)
· SH (Social History)
· Physical Examinations (including review of systems, vital signs, height/weight)
· Investigations (labs, imaging, biopsies)
· Assessment (Dx — Diagnosis, including IDx/PDx/DDx: initial, provisional, and differential diagnoses, respectively)
· Plan (Management)
· Treatment/Prognosis (Tx — successes/failures/adherence and follow-up)
· Summary (optional)

### 3.2. The management of clinical case presentation speech events

While the above template might appear to indicate that all the listed categories should be included in a comprehensive CP, it must be stated at the outset that the inclusion of all categories might actually impede the CPs effectiveness. Not all categories are pertinent to every clinical case and in no cases I observed did the presenter include all of the above categories. Therefore, flexibility in terms of inclusion and omission
are the hallmark of an effective CP. The most pertinent items must be prioritized and given prominence in the presentation or otherwise risk obscuring the most relevant clinical data. Considered management of the CP, such as the organization of data so that the clinically significant features can readily be grasped by the presenter’s audience, is thus paramount. This is an area in which peer work might be invoked in the EMP classroom, since teachers may not be knowledgeable as to exactly which clinical findings need to be made prominent.

Moreover, rarely, if at all, was the precise order listed above adhered to by the presenters I observed. Within certain specialties, large sections were omitted while normally ‘minor’ features assumed greater chronological importance. For example, in one CP performed in an anaesthesiology department in Thailand, the speech event began with the differential diagnosis and proceeded almost immediately thereafter into the treatment category. This was done because it is standard practice for anaesthesiologists to deal with so-called M&M (morbidity and mortality) events that occur while the patient is being treated under anaesthetic.

Endocrinology case presentations in Taiwan heavily focused upon systems review (gastro-intestinal, genito-urinary, etc.) and physical examination results, while largely ignoring vital signs and social history. In the respiratory department of a Vietnamese hospital, CP prominence was given to family history (many respiratory ailments are hereditary) and the results of lab investigations.

Most teaching value to departmental colleagues was contained within the management (or mismanagement) of such clinical events. Therefore, the treatment and prognosis section was often presented in thorough detail, whereas categories more fundamental to history taking, such as HPI or PMH, were occasionally moved to the chronological and textual periphery. Learners should therefore be aware of how to express post-interview data rather than merely present a summary of the more static features gleaned from history taking.

In several cases, negative data (a negative lab test result or the lack of specific symptoms or history) was considered highly significant. Young clinicians should therefore learn how to assess negative data pertinence and subsequently prioritize such cases. For example, in a case from the Vietnamese respiratory department, the presenter strongly emphasized the negative data (no family history of tuberculosis, negative AFB blood test results) in a suspected case of tuberculosis, which allowed the clinician, at least provisionally, to rule out the initial diagnosis of tuberculosis and posit a more accurate differential diagnosis:

To quote: ‘The patient showed indications of pulmonary tuberculosis but there was no family history of tuberculosis and the AFB blood test was negative, therefore we changed our initial diagnosis to...’

3.3. The role of formulaic academic phrases

The CPs I observed were also notable for the prevalent usage of formulaic academic/professional phrases, even among those presenters who did not appear to be otherwise wholly proficient in general English. Formulaic academic phrases are those set lexical items that fall between general English and specialist terminology. These are speech forms used within a professional discourse community, particularly in formalized horizontal (e.g., clinician-clinician) speech events. The usage of such phrases is not only standardized, it marks one as an educated professional engaging in academic workplace discourse. Some examples of these forms noted in the cases I observed are presented below, with the formulaic sections underlined:

From a pathology case: ‘The presence of X indicates a greater likelihood of Y.’

From a cardiovascular case: ‘SH was significant for high alcohol intake but is otherwise unremarkable.’

From a number of cases in varying departments: ‘The patient was an (age + gender) who presented with (symptom/condition/chief complaint) of (length) duration.’

The first two items above represent standardized forms, the structures of which are somewhat situationally flexible. The last item represents a canonical form that should be known to all clinicians (particularly as it is also often applied in academic writing). The prominence of abstract and category nouns in such phrases distinguishes the tenor of CPs from the manner in which the same content might be managed in more casual communication, such as the following, based on the first two examples above:

‘Because X is there, it means there’s more chance that it’s because of Y.’

‘He drinks a lot of alcohol but, except for that, his social life is normal.’

Enabling our learners to speak in the manner of academics and professionals will better allow them to carry out CPs as well as other horizontal clinical discourses.

3.4. The use of acronyms and abbreviations

Most CPs observed included multiple abbreviations in both spoken and written modes as a matter of course. For example, Dx was generally written for ‘diagnosis’, which, in two cases, was further broken down into IDx (initial diagnosis) and/or PDx (provisional diagnosis). Treatment was usually
rendered as Tx. However, the terms ‘diagnosis’ and ‘treatment’ were rendered in full form in speech, while ‘ID’ and ‘PD’ were used as spoken abbreviations for initial and provisional diagnoses.

It should also be noted that while abbreviated forms were regularly used in the CPs observed, some clinicians did not know all the acronyms/abbreviations listed in the generic template displayed earlier. The ‘OPQRST’ mnemonic was recognized only twice in the follow-up interviews (although each constituent item within the mnemonic was readily grasped). The acronyms PMH and HPI were also occasionally not known by clinicians, and both the abbreviated forms and the distinctions between initial, provisional, and differential diagnoses were not always known or clearly understood.

Therefore, both teachers and clinicians should be careful not to assume that acronyms and abbreviations widely used within a particular region or clinical department have universal currency. Some acronyms were noted only in a single department or at one geographic location (such as PCCL, where referring to blood gas analysis, and POMR File as an acronym for Problem-Oriented Medical Report). Such forms may not recur across institutions or even medical departments.

Learners should therefore become familiar with the most widely-used abbreviations and acronyms not only for the sake of brevity in writing but also because during speedy CP data transmission these forms are often deployed in place of full words/terms.

4. Discussion: Other notable features of clinical case presentations

While we may be able to construct a generic, albeit highly fluctuating, synopsis of CPs, observations and follow-up interviews with clinicians raised several other points of interest that may also influence how both EMP teachers and clinical practitioners approach CPs. These are discussed below:

- CPs were most commonly performed as early morning intra-departmental discussion sessions, often with junior doctors and trainees presenting on a rotating basis. In some cases, these were performed daily, in others only once every week or two weeks. In most cases, two or three presentations were performed within the allotted time.

- In most departments I visited, CPs were performed more often in English than in the local language, with the exception being Hanoi Medical University (Vietnam) where the ratio was said to be 50-50. On the other hand, the departments I visited at Prince of Songkla (Thailand) and Brawijaya (Indonesia) Universities required that all CPs be performed only in English, ostensibly because at these hospitals CPs are viewed as vehicles for English practice just as much as they are for the dissemination of clinical knowledge.

- Whether the presenters adhered to a strict format or not depended largely on the individual institution/department. Two followed the SOAP format (Subjective Observation Assessment Plan) closely, some followed a locally established format, whereas others allowed for more formal flexibility as determined by the clinician depending upon the type of case. Interestingly, the well-known SNAPP presentation model (Summarize, Narrow, Analyze, Probe, Plan, Select) was not employed at any of the facilities I visited, although many clinicians interviewed expressed awareness of the model.

- CP formats often varied in terms of the method of presenting general patient data. Some distinguished between current vs. returning inpatients or outpatients. Some explicitly stated the physician(s) in charge. Some displayed a summary of discrete categories marked only with + or – symbols without further commentary.

- In some countries/regions/cases, religion played a factor (albeit a peripheral one) both in terms of the treatment of the patient and when constructing a social history, and this was occasionally reflected in the CP. Local herbal remedies/treatments were also occasionally included in the narrative.

- If and when CPs were assessed by senior clinicians present, the focus tended to be upon the following evaluative categories: Construction of the case, assessment of the patient’s clinical condition, lab examinations and interpretations thereof, management of follow-up discussion, and subsequent clinical planning/follow-up.

- Generally, assessment of the cases was performed holistically. Presenters were routinely asked why they chose to report on a particular problem or what, if any, problems they encountered during the case. In most cases, the CPs led to somewhat muted follow-up open discussion in English, followed by a more robust discussion in the clinicians’ native language, and, in all cases, some final consolidating commentary from senior participants.

Although most presenters used specialist English terminology almost flawlessly, some younger practitioners did appear to have trouble with the use of English formulaic academic phrases (e.g. ‘did a survey’, as opposed to, ‘conducted a survey’; ‘We saw X so we thought…’, as opposed to, ‘The presence of X indicated…’). According to the interviewees, these
academic forms are not explicitly taught at any of the institutions that I visited, even though they are a central feature of professional peer discourse and thus should be included in EMP training.12

5. Summary/Conclusions

CPs have inherent educational value (largely as a form of peer-to-peer information sharing) but are also widely used as assessment tools, with both peers and seniors assessing performance. In seven of the CPs I observed, senior clinicians were assessing younger clinicians by filling in a prepared assessment sheet and offered up critical commentary thereafter. Q&A or discussion sessions followed in every case observed, but these often served more as extensions of the assessment process rather than as an exchange of data or as direct questions.

The inclusion of irrelevant data occasionally interfered with the narrative structure of the CP, an indicator that young clinicians should learn to be selective rather than comprehensive. An emphasis upon the need to highlight significant items and prioritize or organize them either chronologically or in terms of pertinence, such that these features become salient in the CP, formed much of the critical response from senior clinicians.

Finally, we must consider that the teaching of CPs in English goes beyond the mere accumulation of new or useful English forms among medical students. CPs are means by which clinicians become more clearly able to label, categorize, prioritize, connect, and convey medical data — regardless of the language they are performed in.

According to widely-accepted Vygotskian notions of language usage, the function of organizing often disparate data linguistically has the quality of improving cognition, of ordering thought. Therefore, it can be argued that the explicit teaching and learning of such speech events in English can have a positive washback effect on the speakers’ mother tongues — in short, developing effective CP skills in English can actually have positive effects upon clinical thought and expression in Japanese.

The benefit of developing CP skills thus goes beyond the simple goal of enhancing clinical English performance. The explicit teaching and learning of CPs as a core medical speech event actually offers holistic clinical benefits for our learners.

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References

1. Background

Linguistic accommodation is a strategy doctors may use to promote better communication and redress the inherently asymmetric nature of a patient encounter by modifying their language to more closely resemble, or converge on, the language used by the patient, for example, by choosing to use more general words instead of biomedical terminology. This approach is widely recognized as playing an important role in effective doctor-patient communication. In 2014, a key point of the "Best Practice" section of the *Royal College of General Practitioners Report on Health Literacy* urged that, "doctors should apply a 'universal precautions' approach to communications, that is, communicate clearly and without jargon with all patients."1

This need for clearer communication between doctors and patients was demonstrated in a 2010 review article on doctor-patient communications which found that "most complaints about doctors are related to issues of communication, not clinical competency."2 More recently in 2017, The Medical Council of Ireland similarly stated, "Most complaints related to: communications at 19%, diagnosis at 15%, clinical at 10%, dignity 7% and prescribing 7%."3

The process of convergent linguistic accommodation is the process by which a speaker modifies their language to more closely attune with the speech style of their interlocutor. In 2014, a key point of the "Best Practice" section of the *Royal College of General Practitioners Report on Health Literacy* urged that, "doctors should apply a 'universal precautions' approach to communications, that is, communicate clearly and without jargon with all patients."1

This study seeks to better understand the role that vocabulary plays in patient encounters by:

1. Identifying the distinguishing lexical features of standard, real-life doctor-patient communication
2. Assessing the extent to which vocabulary used in doctor-patient encounters can be characterized as "medical" vocabulary
3. Evaluating if departure from the vocabulary and register that the patient uses in their "normal" life is a required feature of doctor-patient interactions

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Keywords: Terminology, register, convergence, medical interview, medical English education

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Data from this paper were presented by the first author at the 21st JASMEE Academic meeting in July 2018, in Tokyo.
If indeed a simplified convergent vocabulary can be identified, this study will discuss the pedagogical implications, including how to make linguistic accommodation a natural part of a learner’s skill set given their linguistic resources and flexibility.

2. Methods

In order to characterize the language representative of the sphere of doctor-patient interactions, a corpus comprised of 46 doctor-patient interaction transcripts (“Doctor-Patient Corpus” abbreviated to DPCorp in this study) was compared with a non-medical corpus, comprised of travel agents interacting with customers (“Travel Agent Corpus” abbreviated to TACorp in this study). This TACorp was chosen as a reference corpus because of a superficial similarity in terms of duration, number of interactions per encounter; and the underlying transactional nature of the interactions. AntConc® 3.5.7 was used for the corpus analysis and key word generation. AntConc was also used to generate wordlists for the DPCorp, listed in order of frequency.

3. Results

A list of 150 key words (which can be defined as those occurring at a higher than normal expected frequency) was generated from the DPCorp by using the TACorp as a reference corpus. Of the list of 150 key words, 50 of them were clearly contextually relevant to the purpose of doctor-patient communication (shown in Table 1). However, fewer than 10 could be regarded as “medical” words, and then only in the most general of senses.

According to Table 1, it would seem that although the doctors and patients recorded in the transcripts are, as expected, talking about health-related matters, these exchanges seem to be characterized by a lack of specialized medical vocabulary. The medically-related words used are those which could be assumed to be comprehensible by the majority of English-speaking patients.

A complete list of all the words used in the DPCorp and how frequently each word was used was also generated to be able to identify any other patterns or trends, the aim being to expand the key word list to include all vocabulary used in the interactions that could be considered directly pertinent to the medical function and aim of these doctor-patient interactions. All words were identified and then categorized as being Contextually Relevant Words, Medical Words, or Medical Specialist Words.

- Contextually Relevant Words were defined as being general words that, although useful for the purpose of health-related matters, are commonly used outside of a medical context (e.g. hot, cold, damaged, risky, comfortable, eating, drinking, arm, leg).
- Medical Words were defined as words that are more predominately used in a medical context, but presuppose no specialized medical knowledge, and are likely to be recognized and frequently used even by those without medical training (e.g. allergies, swelling, operation, kidney, virus, paracetamol).
- Medical Specialist Words were defined as words that are more likely to be unfamiliar to people without a background in medicine, either because they are used exclusively in very specific medical contexts or because the word has a lesser-known alternative meaning when used in a medical context. Also included in this group were names of less common generic drugs and brand names.

As shown in Figure 1, this set of Contextually Relevant Words, Medical Words, and Medical Specialist Words represented 18% of all the individual words used in the dialogues. Although there is almost twice the number of medical word items, the more general contextually relevant words were used much more frequently. Specialist medical words represented by far the smallest set, which resulted in 34 distinct terms once the medication names were removed.

The remaining specialist words ranged between the relatively well known high frequency words, such as angina, which was used 10 times and low frequency medical words such as polymyalgia and stenosis both of which occurred only

<table>
<thead>
<tr>
<th>well</th>
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<td>antibiotics</td>
<td>water</td>
<td>prescription</td>
<td>drink</td>
</tr>
</tbody>
</table>

Table 1. Fifty of the 150 words appearing on the Key Word List from the Doctor/Patient Corpus, 8 of which are highlighted for being “medical”.
once. On closer examination of the transcripts, there did not appear to be any noticeable trend for either party to introduce these medical/specialist words, and they seemed to be introduced as often by the patient as by the doctor.

Of the 5,008 total usages for the 3 combined sub-categories, the highest frequency of usage was seen in the Contextually Relevant Words category with 58%, despite there being approximately half the number of individual words in this category when compared with the Medical Words category, as shown in Figure 2 and Table 2.

The top 100 most frequently used words from the total 657 items accounted for 60% (3,011 usages) of the total 5,008 usages of this set.

On examination of the 100 most frequent words, the list is comprised predominantly of Contextually Relevant Words. Approximately 30% of the list is comprised of Medical Words of non-specialist nature and the only Specialist Medical Words present on the list are the names of 4 medications. There is also a clear correspondence to the original key word list shown in Table 3. It is also interesting to note that of the few verbs on the list, the most frequent are “feel”, “worry”, and “pop” (as in, “could you pop up onto the table”), clear evidence that linguistic accommodation is occurring.

The use of verbs in the doctor-patient interactions was another area examined in this study. Inspecting the verb choices made by the speakers is useful as it gives a somewhat
The verbs used in the DPCorp were identified and categorized into 3 categories:

**Latinate verbs:** verbs derived from Latin which are a feature of a more formal register and are less likely to be used in daily conversation or to be recognized across all strata of society.

**Medical verbs:** verbs used almost exclusively in a medical context.

**Non-Latinate verbs:** verbs that are often derived from Germanic origins and are a feature of more casual register.

Non-Latinate verbs include the majority of the base verbs from which less formal phrasal verbs are formed such as “put up with”, “take in”, and “do away”.

As shown in Table 4, and as expected, non-Latinate verbs make up the overwhelming majority of the verb items and usages.

As shown in Figure 3, although almost three quarters of the verb items that were present in the DPCorp were of a less formal non-Latinate type, the other 2 categories were also clearly present. However, in terms of frequency of use, there was a dramatic preponderance of non-Latinate verbs. Of the more formal Latinate verbs, the only items to achieve any significant frequency were the type of Latinate verbs, such as *remember, notice, and explain* that are recognized as being an unremarkable lexical feature of everyday discourse. This was equally true of the Medical verbs, such as *examine and prescribe*.

The verb frequency data shown in Figure 4 and Table 5 suggest that in terms of register, doctor-patient interactions share more features with regular, everyday conversation than with a divergent asymmetry of register that is characteristic of less patient-centered interactions.

The findings of the study seem to present a picture in which both doctor and patient are predominantly drawing...
Table 5. Top 10 most frequent verbs in 3 categories: non-Latinate verbs, medical verbs, and Latinate verbs

<table>
<thead>
<tr>
<th>Top 10 most frequent non-Latinate verbs</th>
<th>Top 10 most frequent medical verbs</th>
<th>Top 10 most frequent Latinate verbs</th>
</tr>
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<tbody>
<tr>
<td>have</td>
<td>examine</td>
<td>remember</td>
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<td>noticed</td>
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<td>relieve</td>
<td>repeat</td>
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<td>prescribe</td>
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<td>196</td>
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</tbody>
</table>
on the same essentially non-specialist vocabulary base, using terms that are generally recognized and understood by medical non-specialists. This seems to be a desirable state of affairs, for both patients and doctors, and it is difficult to see how this could fail to improve communication, reduce anxiety, and increase patient satisfaction. Finally, this study sought to uncover how this predominantly non-specialist word pool compared with some of the vocabulary resources available to medical students.

When comparing the DPCorp wordlist with an in-house 1,281-word medical vocabulary list from one Japanese medical school, results showed that although there were 87 words that occurred in the doctor-patient interactions, this only represented an overlap of less than 7%. When compared with the 623 items on the Medical Academic Word List (MAWL), there was no overlap. This suggests that vocabulary word lists may not be relevant to the acquisition of oral communicative competence within the context of a doctor-patient encounter.

Regarding the nature of the words that occurred on the in-house medical vocabulary list, it was notable that although there were a small number of specialist medical terms of the kind that would perhaps be difficult for a patient to understand, such as cryotherapy, fascia, and regurgitation, they occurred almost exclusively at the low frequency end of the spectrum and were greatly outnumbered by common expressions such as numbness, rash, burn, cramps, bruise, and stiffness. Overall, as the frequency of usage increased, the degree of specialization decreased, culminating with a small group of high frequency, medical yet non-specialist terms, such as blood pressure, diabetes, and antibiotics.

4. Discussion

If a convergent mode of communication between doctor and patient is a desired outcome of English programs for medical students, it is important to ask when and how the resources to make it possible are made available to medical students. It is, of course, an expected goal that all students know them all, and more importantly, feel comfortable using of the terms contained in the contextually relevant vocabulary and general medical vocabulary outlined in this study, but by the end of their 2nd year, it would be to the benefit of both the future doctor and their future patients if students know them all, and more importantly, feel comfortable using them.

One approach to overcoming this specialist/non-specialist divide may be by explicitly giving 1st and 2nd year students the opportunity to explore more fully the role of the patient by making the development of “patient English” a more explicit goal during role-plays. Students are likely to become more invested in the role of the patient if they are required to expend thought and time creating a simulated patient (SP) persona with a detailed and realistic history and their own unique fears and needs. Students would role-play and develop this character for the entire year.

Students would be tasked with creating a detailed and unique socio-medical history for their SP character. Learning support would be provided to develop the non-specialist “patient English” needed to perform the SP role in a realistic and convincing manner. This may be an efficient way of emphasizing the importance of the language of linguistic accommodation and provide a more stimulating experience whatever role they are asked to perform. These ideas could be further reinforced by expanding evaluation to include their performance not only in the role of a doctor but also in the role of a patient.

5. Conclusion

Without a sound knowledge of the basic non-specialist vocabulary of the kind highlighted in this study, it seems inevitable that medical students, and the doctors they become, will be unable to communicate using language that patients understand best. An overreliance on specialist medical vocabulary in the consulting room leads to miscommunication, with an attendant increase in patient anxiety and decreased patient satisfaction.

The seminal study by Ha et al. cited earlier in this paper astutely notes that, “75% of the orthopedic surgeons surveyed believed that they communicated satisfactorily with their patients, but only 21% of the patients reported satisfactory communication with their doctors.”

In the simplest terms, it can be argued that patients are happier when doctors talk like people. However, in order to develop the skills necessary for this linguistic accommodation, student doctors should be given the opportunity to identify and practice using the type of language that most closely resembles the language used by patients.
References


国際医療福祉大学における英語医療通訳入門の授業報告

A report on the introductory course on English medical interpreter training at International University of Health and Welfare

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国際医療福祉大学は、1995年に開学した日本初の医療福祉の総合大学であり、全国に6つのキャンパスがある。栃木県にある大田原キャンパスは3学部(保健医療学部、医療福祉学部、薬学部)8学科(看護、理学療法、作業療法、視機能療法、放射線・情報科、言語聴覚、医療福祉・マネジメント、薬学)からなり、2015年4月から選択科目として英語医療通訳入門を開講している。本稿では、2017年度に実施した授業について報告する。

1. 英語医療通訳入門の概要

1.1. 閲読の経過

英語医療通訳入門を開講した背景には、大きく分けて2つの理由がある。1つ目は英語の選択科目の充実を図るためである。本学では開学以来、英語リスニング、英語ライティング、英語会話、資格英語、基礎英文法、聖書英語などさまざまなタイプの選択科目を開講しているが、学生が専門としている医療福祉分野と直接的な関連がある科目は、長らく医学英語のみであったことから、新たな科目開設の必要を感じた。医学の内容に即した専門用語やその他の英語表現について学ぶという意味では、医学英語の授業と大差がないようにみえるかもしれないが、英語医療通訳入門には、「医療通訳(者)の存在を患者に伝える」使命があると考えている。医療英会話のテキストでありながら医療従事者と、患者によるダイアログを学ぶだけでは知ることがないかもしれない医療通訳(者)に光を当て、医療従事者とは異なる視点で患者と接する通訳者の存在について学び、その技術習得を目指しているという点が特徴的である。

2つ目の医療従事者と外国人患者のコミュニケーションを支援する医療通訳者の存在について筆者自身が知り、理解を深めるために本学の学生にも医療通訳について学んでほしいと思ったからである。日本の医療機関を受診する外国人が急増している現在、言語、文化、宗教が異なる外国人の患者に適切な対応ができる医療人を育成することは急務である。以上2つの理由により、2015年4月から開講した次第である。

1.2. 2017年度の授業状況と授業内容

授業は各学期全15回、毎週金曜日の15時(16:20〜17:50)に実施した。前期(4〜7月)の受講生は18名(放射線・情報科10名、薬学6名、理学療法1名、視機能療法1名)、後期(9〜1月)は9名(放射線・情報科4名、薬学4名、視機能療法1名、うち7名は前期から継続)である。受講生の学部・学科、学年は問わず、留学生も受講可能としている。過去に中国人留学生2名が受講したこともあったが、受講生の多くは日本人の1年生であり、主な授業内容は以下の

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本稿は、日本通訳翻訳学会第18回年次大会(2017年9月9日、愛知大学)で行った口頭発表の内容に基づいている。
通りである（表1，2）。

教科書は，前後・後期ともに，「そのまま使える医療英会話」（永井村志夫著，医学書院）を使用しており，授業で扱う診療科は教科書の内容に沿っている（この教科書には含まれていない診療科，例えば，整形外科，心療内科，耳鼻咽喉科，歯科については，教員自作のプリント，動画，関連資料などを用いて学習した）。定期試験は，筆記試験とロールプレイであり，成績評価の基準は，筆記試験・ロールプレイ各40%，その他（授業態度・課題への取り組みなど）20%とした（ロールプレイの重要性を設立させるため，2018年度から筆記試験30%，ロールプレイ60%，その他10%に変更している）。授業は主に，プリント学習→教科書学習（前半）→教科書学習（後半）→ロールプレイの3段階で構成されており，以下にその詳細を示す。

1.2.1. プリント学習
教科書は，前期に，各診療科と関連のある用語や病名などを書き込むプリントを配布し，調べ学習を行っている。例えば循環器科の場合は，4プリントの前面に，cardiology, cardiologist, coronary arteryなどの用語が書きしておく，学習者はそれらの日本語の意味（心臓病学，心臓専門医，冠状動脈）を調べて書き込む。その後，心臓の働きや循環系についてイメージしやすいように，写真やビデオなどの視覚教材を使って説解を加える。プリントの裏面には，angina pectoris, myocardial infarction, arrhythmiaなど循環器科と関連のある病名が書き出されており，日本語の意味（狭心症，心筋梗塞，不整脈）を調べて書き込み，主な病名の原因や症状については教員が要約した内容を提示している。

1.2.2. 教科書学習（前半）
教科書は，診療科ごとにまとめられており（全16章），各章は医療従事者と患者による英会話モデル「Let’s Listen!」（日本語訳付記）と，会話モデルで使われている語彙と表現をまとめた「Words and Phrases」，重要表現をまとめた「Useful Expressions」からなる。英会話モデルの内容に入る前に，「Words and Phrases」の内容（単語や熟語の意味，発音，アクセント）を確認してから，各ユニットの会話モデルについてディスケーションを行う。学生は教員自作のDictation Sheetを受け取り，会話モデルの言語を複数回聴きながら分包を埋め，会話モデルを完成させる（この段階では教科書を見ずに行う）。 Dictation Sheetは，プリント学習や教科書の「Words and Phrases」で確認した語彙や熟語，また各種診療科と関連の深い病名や症状を英語で書き込む形式になっている。その後，各自で教科書を見ながら答え合わせを行い，正誤を確認してから改めて音源を聴くことで，会話モデルの全体像を把握する。

1.2.3. 教科書学習（後半）
その後，各ユニットの会話モデルで使われている語彙，文法事項，冠詞，複数形，アクセント，発音などについて詳細な解説を加える。例えば語彙については，医療事項においてrunという単語は「走る」ではなく「検査を行う」という意味で使われ，applyなども同様に「応用する」というよりは「（薬を）合剤を」という意味であるという説明を加えることで，身近な語彙の意味に使われる場面によってどのように変化するのか，語彙の意味の多様性について伝える。また，語彙の意味を推測する手助けとして，hyper-：上記，hypertension：高血圧，cardi（心臓）：cardiology（循環器内科），myo-：筋，筋肉（myoma：筋腫），-itis：炎症（hepatitis：肝炎）などを利用する。医療英語の頻出の接頭辞・語根・接尾辞の働きについて学習し，語彙力の強化を目指している。

文法事項については，教科書の英会話モデル文で使われているさまざまな時制とその働きに注目している。日本人の英語学習者にとって，現在形，現在進行形，過去形，未

<table>
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<td>第1回 医療通訳とは，医療通訳の心構え，人体図</td>
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<td>第2回 受付，診察室でのあいさつ，病院の聞き方</td>
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<th>表2 2017年度 後期</th>
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<td>第1回 医療通訳とは，医療通訳の心構え，人体図</td>
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<td>第2回 在日外国人のメンタルヘルス</td>
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<td>第7回 産婦人科</td>
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<td>第12回 日本人の学生同士でロールプレイ練習</td>
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<td>第14回 定期試験（筆記），筆記試験終了後に留学生とロールプレイ練習</td>
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<td>第15回 定期試験（ロールプレイ）</td>
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1.2.4. ロールプレイ

ロールプレイは、医療従事者、外国人患者、医療通訳者の役に搭乗し3人1組で行う（学生の人数によっては3人以上の場合あり、筆者がサポートに入ることもある）。1回目は学生A：医師、学生B：患者、学生C：通訳者、2回目は学生A：通訳者、学生B：医師、学生C：患者のように学生間で役割を交換し全員が通訳を担当するようにしている。教科書の会話モデルをもとにしてロールプレイをする。会話の展開がゆるやかでなくならないように相手の傾向がみられるので、教科書に従ってロールプレイのブリントを使用している。例えば、教科書にはI’ve been having a pain in my chest these past few weeks.と書かれているが、ブリントでは下線部が空欄になっており、since last week.など各自で会話を設定することができる。また、My father died when he was 52 of a heart attack. That was 10 years ago.と書かれているが、笹に従ってMy father died when he was 52 of a heart attack.のようになる。

ご質問について、患者の役を演じる生徒の外見を考慮して準備することもできる。また、自分の班に在籍する外国語を学んだ生徒を対象とした日本語教師の役を演じることもできる。
通訳入門ロールプレイ外国人協力者バンク」のような登録システムを作るなど、さまざまな可能性を探ってきたい。

1.2.5. その他：外国人の文化や宗教に関する学び

ブリントや教科書による学習に加えて、日本に住む外国人に目を向け、彼らの文化や宗教について理解を深める機会を提供するようにしている。今年度は、埼玉県の巖槻市や川口市周辺で増加しているクルド人について、また世界中で増加しているイスラム教徒について紹介した。在日クルド人については、筆者が過去にインタビューをしたクルド人女性の話をもとに、母国での過酷な社会から逃れるために来日してきたこと、何故も難民申請をしているが認定されない苦労、日本人に対する彼女たちの思いについて紹介した。

さらに、イスラム教徒は世界的に増加しているが、多くの日本人にとっては馴染みが薄いと思われる。しかし、訪日外国人のなかには多くのイスラム教徒が含まれており、日本の医療機関を受診する機会が増加しているから、彼らの文化や宗教について知り理解を深めるべきである。例えば、イスラム教徒はアルカール飲料や豚肉料理を提供しなければならないという話ではない。医療現場では、イスラム教徒の患者に対し、ノンアルカールの消毒液を使う。入院患者にはハラル食品（イスラム教で禁じられた物質や処理・調理方法が含まれていない飲食物）を提供する。院内に祈りの場所を設けるなどの特別な対応が求められる場合がある。すでに、イスラム教徒のニーズに合わせたサービスを提供している医療機関の取り組みについて紹介し、外国人患者の文化や宗教に配慮する必要性を伝えた。

今後は、前述のクルド人を含め、難民認定を申請している在日外国人法務省入国管理局によると、平成29年難民認定申請数は19,628件で過去最多となっている）の健康状態、医療のニーズ、現行の医療サービスに対する意識についてアンケート調査を行うとともに、彼ら自身の文化や宗教、生まれ育った郷里と日本人に対する思いについてもインタビュー調査を行う予定である。また、可能ななら英語通訳専門の授業に在日外国人や医療通訳者のゲストを迎え、外国人からは日本の生活や日本の医療などに対する彼らの声を、医療通訳者からは、効果的な学習法、通訳者としての経験や印象に残っている外国人患者とのエピソードを聞く機会を設けるなど、よりリアルな学びにつながる工夫をする必要があると考えている。

筆記試験は、語彙問題（50問）選択式、日本語→英語）であり、①職種の名称（医師、看護師など）②各診療科と関連のある人体各部位の名称（甲状腺、卵巣など）、③病名（くも膜下出血、乳がんなど）、④その他（自己、通気、通所など）に関する語彙知識を問う。筆記試験対策として、試験日の1カ月ほど前に出題される単語を一覧にした対策プリントを配布し、早めに勉強にとりかかることができるようにしている。筆記試験前の授業では、引き立ちの語彙テストを行ったり、語彙に関する（肺→lung、肝臓→liverなど日本語と英語で同じ意味をもつカードを組み合わせたゲーム）を行ったりしながら筆記試験に対する学習意欲の向上と記憶の定着を図っている。

ロールプレイ試験は筆記試験の翌日に実施し、本学の留学生が患者役、教員が医師役となる。ロールプレイの題材は、教科書の会話モードに基づいており、前期あるいは後期に学んだ会話モデルのなかで学生各自が1つの診療科を選んで行う。例えば、2017年度前期の授業では、循環器科、呼吸器科、消化器科などを1つの診療科について学習したが、このなかから1つの診療科を選び、自分で選んだ診療科の会話モデルに沿ってロールプレイを行う。試験は診療科ごとに1人ずつ行い、主に発音、アクセント、抑揚、アイコンタクト、通訳の正確さについて評価する。ロールプレイ試験の際、教科書の内容を許可しているが、患者や医師に目を向けず教科書を背負っている場合は減点。教科書を持ち込む適切な通訳を行った場合は加点している。ロールプレイ試験の後でも、気付いたことがあればフィードバックを与えているが、前回の通り、その内容と方法の両面においてさらなる改善が必要である。

3. まとめ

国際医学福祉大学（大田原キャンパス）における英語医療通訳入門の概要について報告した。医療通訳に欠かせない専門用語や会話表現の学習に加えて、ロールプレイを行うことで通訳者に必要な技術の習得を目指している。とりわけ、ロールプレイは医療通訳の技術を磨くために必須のアクティビティであり、学生のパフォーマンスを向上させるためには良質のフィードバックが欠かせない。しかしながら、これまでのフィードバックはシステム化の必要があるのではなく、その内容や方法をさらに改善が必要である。今後は、ロールプレイの評価項目と評価基準を明文化する。さらに口頭だけでなくビデオで録画した映像を使いながらわかりやすいフィードバックを行い、学生が自分でのパフォーマンスについて振り返る機会を設けるようにすることで、フィードバックの質を向上させていきたい。
Poverty and medicine’ as a potential English education topic in the medical humanities

In 2016, the Medical Education Model Core Curriculum in Japan was revised to define the communicative competencies that doctors should acquire in order to establish a good relationship with, and support the decision-making of, patients and their families on the basis of the patients’ psycho-social background. This follows in the footsteps of the Tool for Assessing Cultural Competence Training (TACCT), which emphasizes the importance of doctors’ cultural competency. Both represent ideals, but the author has frequently observed that Japanese medical students often lack skills in self-expression, and occasionally display a lack of both empathy and imagination. Although students are often reminded within the curriculum of how crucial it is to show empathy to patients, the reality is that, faced with a massive volume of specialized subjects and clinical practice in the curriculum, they move busily through the system without thinking deeply about, for example, socially vulnerable people or the relationship between social justice and medicine. The weakening of liberal arts education in general also reinforces the tendency towards reducing the amount of time devoted to the humanities in university education in Japan, in spite of the fact that major academic bodies like the Association of American Medical Colleges, the UK’s General Medical Council, and Japan’s Ministry of Education all emphasize the importance of the humanities in medical education. For these reasons, the author questions whether we, as language teachers in medical schools, should seek only to improve students’ technical English language performance/skills, which are often manifested in terms of acquiring medical terminology, differential diagnosis, and medical interview skills. This paper describes the contents of the author’s classes, which focus on poverty and medicine from the viewpoint of the humanities and social sciences, and further examines how language education can play a new role in medical education.

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1. はじめに

平成28年度に改訂された「医学教育モデル・コースカリキュラム」(平成28年度改訂版：以下、改訂版コースカリキュラム)では、医師として習得すべきコミュニケーション能力を「患者の心理・社会的背景を踏まえながら、患者およびその家族と良好な関係性を築き、意思決定を支援する」としている。これは文化理解や他者性を涵養に入れられた医療コミュニケーション能力といえる。これはTool for Assessing Cultural Competence Training (TACCT)が強調する異

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者が医学部医学科1年生の英語授業で扱っている人文・社会科学的視点から貧困と医療を考える課題を一例として、今後、言語教育が医学教育で果たすその新たな役割について考察する。

2. 医学部を取り巻く教育環境

2.1 教養教育の弱体化
アメリカ医学大学協会(AAMC)の方針により、臨床実習時間の増加や、OSCE (objective structured clinical examination: 客観的臨床能力試験)実施など、医学部専門教育を取り巻く環境は大きく変化している。とりわけ臨床参加型の医学教育重視の傾向が臨床実習時間の増加へと直結し、その影響で専門教育、特に基礎専門教育科目が玉突きで低学年に送られ、必然的に1～2年次で提供される一般教養教育カリキュラムの大幅な時間数減につながっている。すでに本学科医学部では「英語」を除く2年次の一般教養の設定がないことに加えて、1年次では前期で単位の取りこぼしがない限り、後期の一般教育科目は2単位を必要とするだけで、「英語」を除いた一般教養の必須単位数は「環境と生命」2単位、「現代社会の課題」から2単位、「学士力発展科目」から2単位の計6単位となっている。残念ながら一般教養科目の開講科目はパラパラに付いていて言語館の幅は非常に限られている。ことに人文科学系科は残念な状況であり、例えば「哲学」や「文学」を一般教養で学ぶ機会は与えられていない。

前述のように学生たちの抱える英語力以前の問題を前にして、単なるスキルとしての英語運用能力のみを志向することが、医学部の英語教育としてはたして妥当なのかという疑問や、そもそも「英語」を教えるとは一体何を教えるのかという問いに、われわれ英語教員はどう向き合えばいいのか。言語学および英語教育の専門科目で学ぶものなのかどうか。そもそもコミュニケーション能力とは何なのかなど葛藤を尽きない。

2.2 医学教育とコミュニケーション能力
改訂版コアカリキュラムでは、医師として習得すべきコミュニケーション能力を、以下のよう規定している。

●A-4 コミュニケーション
患者の心理・社会的背景を踏まえながら、患者およびその家族と良好な関係性を築き、意思決定を支援する。
・A-4-1) コミュニケーション
ねらい：医療内容をわかりやすく説明することなど、患者や患者家族と対話を通じて、良好な人間関係を築くためのコミュニケーション能力を有する。
学修目標：①コミュニケーションの方法と技能(言語的と非言語的)を説明し、コミュニケーションが態度あるいは行動に及ぼす影響を概説できる。②コミュニケーションを通じて良好な人間関係を築くことができる。③患者・家族の話を傾聴し、共感することができる。

・A-4-2) 患者と医師の関係
ねらい：医師と患者の良好な関係を築くために、患者の個別的背景を理解し、問題点を把握する能力を獲得する。
学修目標：①患者と家族の精神的・身体的苦痛に十分配慮できる。②患者にわかりやすい言葉で説明できる。③患者の心理的および社会的背景や自立生活を送るための課題を把握し、抱える問題点を抽出・整理できる。④医療行為が患者と医師の契約的信頼関係に基づいていることを説明できる。⑤患者の要望(診療・転院・紹介)への対処の仕方を説明できる。⑥患者のプライバシーに配慮できる。⑦患者情報の管理義務と患者などの情報提供の重要性を理解し、適切な取り扱いができる。⑧

それでもコミュニケーションの目的とは何であろうか。「何を伝えること」は話す目的ではない。伝えることはあくまで手段である。私たちは伝えることで自分が必要なものを手に入りたい、だから話をする。これが目的である。

コミュニケーションの根底には必ず何らかの「ニーズ」が存在することをNonviolent Communication(以下, NVC)のマーシャル・ローゼンバーグは教える。NVCによれば、医師が患者を診療するためにコミュニケーションを取りその目的は、治療を成功させて患者の幸福に貢献することかもしれないし、ひょっとすると医師としての自分の名声を高めることによって成功をつかむかもしれない。その意味では自己を大切にして必要としているというニーズがある。この点は、患者の心をとどめる存在である。患者の心理的および社会的背景や精神的・身体的苦痛を理解することなしに、コミュニケーションで相手を引くようなことがあれば不適切であるということはない点にある。

その一方で、エビデンスや最新の医療技術の進歩に伴って、医療の非人間的な側面がともたらす問題もGoulston (2001)1)により指摘されている。

Yet, at the same time, there is undoubtedly public cynicism and a degree of dissatisfaction with the medical profession. Doctors are perceived to be over-materialistic, lacking the qualities of caring and compassion and unable or unwilling to communicate adequately with patients.

さらにCharon(2006)1)によれば「医学教育者は、個々の患者に対して共感をもち、信頼され、感受性豊かで診療できる医師を育てるために熱心に取り組んできたが、残念
ながら「最近までこうした努力は医療にそれほどの影響を与えてこなかった」(中略)医療社会学やトレーニングプログラムでは、成人を、共感的で、敬意をもつ、利他的で、倫理的な責任をもつような人に訓練することはできないという点で、ほとんどの人の意見が一致するだろう。このような特性は幼少期から発達をみるものだからである。実際、医師が生まれながらもっている他者の苦しみに対する共感、苦しんでいる他者の尊重、倫理的な洞察などは、医学教育の過程でわれわれ医師は教育を受けければ受けられるほど、目の当たりにする苦しみに対して無感覚になっていく」と、なかなか手掛ける指摘もある。この点については、日本人医学生では違う研究結果もあるらしいが、いずれにせよ改訂版アカデミーで示されたコミュニケーション能力は、医学教育が取り組むべき真新しい課題であることが理解できる。はたして、われわれ語学教師はこの課題を前に、医学生に対して一体何ができるのだろうか。

2.3 異文化理解と医学教育

前述の内容と平行して、欧米の医学教育において重視されている能力が異文化能力(cross-cultural competency)である。医療分野における異文化能力については、Lu & Corbett (2012)が「異文化の多様性を対する能力を示す異文化能力は、患者のつながりである信念や価値観、習慣などが及ぼす影響を考慮あるいは考慮に入れないこともあるだろう」と述べている。結果として双方に誤解が生じ、医師側は不適切なケアを提供し、患者側は処方された医薬品を拒む、したがって、選択の結果につながる。この問題に対する教育を通じた1つの解決策は、関連する能力(competence)の習得を通じて医学生に異文化者(intercultural speaker)に成長させることであると指摘する。医学教育における異文化能力について筆者は自著(2018)に詳述したが、ここではAAMCが策定したTACCTの4つのドメインを挙げるに留めた。

Domains:
- The definition of cultural competence and its key aspects
- The impact of stereotyping on decision-making
- Awareness of health disparities
- Cross-cultural skills, such as working with an interpreter

3. なぜ医療人文学か

改訂版アカデミーにとてTACCTにとて、現在の医学教育において求められる医師像として浮かび上がる対人能力・コミュニケーション能力を、単なる知識やスキルとして捉えることはあまりにも表層的である。「コミュニケーションの方法と技能(言語的と非言語的)」を理解するには、コミュニケーションの身体性を、自分の身体で理解することが必要になる。「コミュニケーションを通じて良好な人間関係を築くことができる。患者・家族の話を傾聴し、共感することができる」と説くことは簡単であるが、誰しも経験することで表面的な共感はすぐにパレルに。医療におけるプロフェッショナリズム研究によれば、医学が利益主義と実施義務をどれほど推奨したとしても、それだけは実践にはつながないことがわかる。また、「患者と家族の精神的、身体的苦痛に十分配慮して」「患者の心理的および社会的背景や自立した生活を送るための課題を把握」するためには、後述する「社会構造(家族、コミュニティ、地域社会、国際化)」と、「健康・疾病との関係」(健康の社会的決定要因(social determinant of health; 以下、SDH))の理解が欠かせない。これらに対処するためには、人文社会科学的な見解がどうしても必要になるのではなかろうか。そして、「医学教育が学生たちに患者の苦痛に共感しつつ対応することを求められるものとしても、共感の挑戦を備えることはできるかもしれない。例えば、苦しみを認識する能力、自分が認識したことを厳密に解釈する能力、患者への感情移入と無関心の間の選択をすることができる選択に至る能力、病の出来事を複数の視点から見ること、病から発想するさまざまな問題を思い描き、そしてそれを心を動かされた行動に移す能力など」を培うことは可能であり、それは医学部における言語(英語)教育が担う新たな役割であろう。また、教養というものが「ある事実をうまくからの異なる側面から眺めてみることができる」ということであり、「それゆえ自分自身のたたずまい書き換え・パーソナージャアップを要求する」し、「常に限界をみ出しそうとする」ものであるとするならば、「哲学」「社会科学」「文学」「心理学」など多分野の学問を含むべき医療人文学は、危機的な状況をも含めて医学教育・医療教育を専門教育の新たな架け橋としても機能するであろう。

医療人文学が果たす役割についてLu(2012)は以下のようによく述べ、医療現場で遭遇する感情を伴うような出来事に対し「安全な距離」を確保できる利点を述べている。

... the discipline of medical humanities has a broader function: to allow clinicians space for reflection on their emotional and affective responses to their medical experiences, and on the place of their profession in wider culture. Literature, in this scheme, has its place relating to their personal and professional identity at a 'safe' remove.

文学はそれがフィクションにとてノンフィクションにとて、登場人物に感情移入することを通して、私たちは他者との人を己の人生として生きる。たとえそれがひとときであるにせよ、それまでの人生で獲得した価値観や信念が大
サを描かれる経験となる場合もあるだろう。

Charon(2000)はいう、医療者や医学生に文学を活用する手法は、実際には多岐にわたる。そして(患者の語る)物語の赤字を追うことができず、異なる視点を許容できず、他者のストーリーを語る信頼できる語り手となり得ず、声やイメージに無視覚であり、人間の秘められた動機、切なる思い、築造、言葉を共有する仲間に興味を持てる医師による医療は、患者に甘んじてきたと述べ、医師にとって物語能力がどれほど重要であるかを以下のように強調している。

Teaching literature to doctors and medical students fulfills embarrassingly instrumental goals at the same time that it allows wild conceptual play. Instrumentally, training in such literary concepts as genre, narrative stance, reader response, subtext, metaetext, and imagery can provide medical students and doctors with skills that their elders did not have, never got and did not. Patients have suffered long enough the consequences of a medicine practiced by doctors without these skills – doctors who cannot follow a narrative thread; who cannot adopt an alien perspective; who become unreliable narrators of other people’s stories; who are deaf to voice and image; and who do not always include in their regard human motives, yearnings, symbols, and the fellowship born to common language.

さらにCollett & MacLachlan (2006)が“it provides a means of attending to voices other than those presented in habitual social and professional situations”と述べるように、忙しい診療業務や専門教育のなかでは見過ごされ無視されてしまうような、しかしとても大切な声に耳を傾ける機会を与えくれる。

また患者の抱える悲哀、怒り、危険感は、それぞれに違う“恵味”がある。そこに深く耳を傾けるためには“ことばの解像度”を上げることも重要である。それはあたかも解像度300ピクセルのデジタルカメラで撮影したデータを、1,200ピクセルでプリントすることは絶対に不可能であるように、病者の物語を自分に入力（理解）し、それを病者の思いに寄り添い出力（共感・代弁）するには、それまで培ってきた自分の人生の体験と、もてはやうの幅を広げ、さらにはその理解をつかみ出すことさえ要求される。人文学的教養はそれをサポートするために存在するとも言えよう。そして、そのような丁寧な作業は「病から譲歩するさまざまな問題を思い描く能力」や「他者のストーリーを語る信頼できる語り手となり得ない」とも、筆者は授業で学生に伝えている。

自己を無意識にる文化に固執し、それがすべてであるという自文化中心主義(ethnocentrism)から脱し、自己省察とメタ認知による「気付き(self-awareness)」とともに、医師としての成熟した信念や価値観を醸成していくことは、「心ある医療者」の育成に不可欠であり、物語を通した付きはその後押しとなると思われる。

4. 貧困と医療

改訂版コアカリによって「B-1-6」社会・環境と健康」項目において、さらに以下のねらいと目標を掲げている。

・ねらい：社会と健康・疾病との関係を理解し、個体および集団を取り巻く環境諸要因の変化による個人の健康と社会生活への影響について学ぶ。

・学習目標：①健康(健康の定義)、障害と疾病の概念と社会環境（機能障害、活動制限、参加制約、生活の質(QOL)、ノーマライゼーション、バリアイフリー、ユニバーサルデザインなど)を説明できる。
②社会構造（家族、コミュニティ、地域社会、国際化）と健康・疾病との関係（健康の社会的決定要因（social determinant of health))を説明できる。
③仕事と健康、環境と適応、生存環境、病原因と保健行動、環境基準と環境影響評価、公害と環境保全が健康と生活に関与する影響を概説できる。
④ライフスタイルの健康問題（母子保健、学校保健、産業保健、成人・高齢者保健)を説明できる。
⑤スポーツ医学を説明できる。

管見の限りではあるが、医学部入学生の多くは保護者が医者というのはもちろんであるが、人並み以上の経済力や環境に恵まれた家庭に育ち、おおよその貧困や社会的弱者とは無縁の生活を送ってきた者が多い。英国では「Tomorrow's Doctors」のなかで以下のような述べている。明確な階級社会であることに加えて、おそらく日本と同様の状況を鑑みての指摘ではないかと想像できる。

A medical student is supposed to know the social and cultural environment in which medicine is practiced. They are expected to understand a range of social and cultural values, and differing views about healthcare and illness [...]

They must recognize the need to make sure that they are not prejudiced by patients' lifestyle, culture, beliefs, race, colour, gender, sexuality, age, mental or physical disability and social or economic status. (General Medical Council)

そして、社会構造と健康の社会的決定要因(SDH)を真に理解しようとするとき、貧困の問題を避けて通ることはできないであろう。

貧困は人類最大の病である。そう言ったのは誰だったか。

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5. 医学科1年生「英語」授業と学生たちの気付き

筆者が医学科1年生向けに行っている「英語」（半期15コマ）の授業の内容は以下の通りである。

_topic1:_ Starting a New Life
Material: Becoming a doctor (Short essay)
_topic2:_ Belief and Future
Material: Beacon in the night (Short story)
_topic3:_ Poverty and Human Conflict
Material: Shame (Short story)
_topic4:_ Poverty and Medicine
Material: I, Daniel Blake (Movie)
_topic5:_ Communication (Group discussion & Project work)
Material: Good patients
_topic6:_ On being a doctor
Material: Communia (Essay)

このうち貧困と医療を扱うTopic 3とTopic 4について以下概説する。Topic 3ではDick Gregory作の短編小説『Shame』を読み解いていく。黒人である少年のチャリティープロジェクトを通じて貧困の現実や他者の無知、社会から取り残された者のやるせないまでの厳酷さと怒りが語られている。授業では、貧困が人間の心理や尊厳に及ぼす影響を考え、グループでのディスカッション（英語と日本語）を通じて気付きを深めていくことを目的としている。授業の目的は以下のようにシラバスに示している。なお、この小説および授業の手法についてはLu(2014)を参考にしている。

Aim of this class: To provide an opportunity to consider how poverty reveals the fragile and sometimes the darkest side of the human heart, and to understand poverty and its impact on the human condition, which is fundamental to understanding the diversity of human life and humanity.
Learning objectives: By the end of this class you should have:
- expressed and justified opinions on poverty issues.
- developed an understanding of the conflict between the individual and society.

Topic 4では貧困と社会正義の実現について医療の側面から考えていく。授業の目的は、以下のようにシラバ上に示している。

Aim of this class: To provide an opportunity to understand the reality of the vulnerable and the poorest people’s lives in a developed country, the UK, how it is represented in policy making by the government, and why we should tackle these issues as medical professionals.
Learning objectives: By the end of this class you should have:
- understood what is being done to vulnerable people in the UK’s social security system, and impairment of human dignity.
- developed an awareness of how human health is impacted by economic inequities.
- expressed your opinions on what medical professionals can/should do to change health inequity, and why it is necessary.
I SOLEMNLY PLEDGE to dedicate my life to the service of humanity.
I WILL RESPECT the autonomy and dignity of my patient.

[I will respect the autonomy and dignity of my patient.]

Why your doctor should care about health equity

Given the absence of medical professionals, and their delayed outrage in the film's final scenes, one is prompted to consider the profession's responsibility to advocate for patients, and the degree to which medical professionals should challenge the socioeconomic inequities that impact on health.

[Given the absence of medical professionals, and their delayed outrage in the film's final scenes, one is prompted to consider the profession's responsibility to advocate for patients, and the degree to which medical professionals should challenge the socioeconomic inequities that impact on health.]

6. Studentからのフィードバック

以下、授業後の感想をいくつか抜粋した（下線は筆者）。

1）I [Shame]
   ・自分の当たり前は他人の当たり前とは違うことを再確認した。
   ・Richardの貧困の共感を想像する過程で、世界には自己の知らないことがたくさんあったと感じ、理解するのは難しいが、理解しなければならない。
   ・貧困に対する誤差があるかの気持ちになることの大切さ。
   ・"poverty"について本当に理解するには「かわいそう」という感情を抱くのは少し過剰なわけだと思う。
   ・私は貧困に苦しむという体験をしたことがない。他人の生活は想像を遥かに越えているのでお互いの世界観のなかから接して得るだけだと気付いた。
   ・私は絶対にわからない貧困の苦しさや辛さなどののではないかと思う。そして将来そのことに私は苦しむだろうと思う。
   ・登場人物の心情やその他の設定が深くかかわっていること、感情を読み取ることが難しいが面白い。

2）I, Daniel Blake
   ・真剣に生きてきた人が報われない社会構造の不平等さに無力感を感じました。しかし彼で議論し、他者の意見を聞いていくうちに医師として患者のdiseaseを診ただけでなく、患者のバックグラウンドを考慮して治療を行うことが現実的に自分ができることだと思うようになりました。
   ・映画を見て非常に悔しい思いをしました。表面に見えることだけを見て、その背景にあるものを知らなければ、本当の誰かを救えるのだろうか。自分が医師になったときにもいえることだ。
   ・（ダニー張）悔しい思いのなかで亡くなったことを思うと涙があふれて止まりませんでした。こんな現実を知ら
In the past, doctors did not show their emotions. Patients could live or die, but the doctor remained unemotional. Nowadays, doctors know that their work often needs laughter, tears and anger as well as science. The good doctor can use his own emotions as part of the therapy. When a child dies in the hospital after a car accident, the patient’s only comfort may be the sweat and the tears on the face of the doctor who tried to save him.

7. 察考

物語を通じて貧困の現実を垣間見ることで「自分の当たり前の生き方を思い出し、「世界は自分と関係ない」という心情を改めることで、自分を命題にすることで、自分を枠に感じ取ることで、他人や他者との関係を再考することで、自分を大切にし、他人や他者を大切にしていくことが大切であると思われた。
8. 結びにかえて

小論では、医学教育のなかで言語（英語）教育が果たす新たな役割の一端を提示した。すなわち物語を読み解くことを通して、病や貧困という弱者の声に耳を傾け、痛みに共感し、とさしてともに絶望し、そして希望を探していたという体験をさせること。そんななか、答えの問いに迫られ続けてきて自らの無力さに悔しさを募らせ、主人公の無念さに流る学びを通して学んだことは教師にとっては大変な教訓の時だった。

「Shame」で主人公のRichardに対して担任教師が語りのあらまし「Furthermore, we know you don't have Daddy」と教授中に言ってしまう場面がある。隠蔽教師だと思っていたが、何度か読むと同時に筆者が経験した8年前の出来事がふと蘇った。

当時、筆者の義母は末期がかかった。恥ずかしい医師の診察を受け、ようやく三大療法ではまず術のこともわかったが、それでも食い下がる義母に向かい「あのね、僕は正直に言う医者だから誰でも正直に言うわけでもないけど、これは治らないよ。大抵身を投じようなわれられる義母の後ろ姿。私は、医師はおかに義母に対してただ無言でしかなかった。今だって義母にどんな言葉をかけあげられるだろう。私たちは辛すぎて言葉にならないこと、言葉でできないことをととして人生で出会い。

今になってみれば、あのときの医師も万策尽くした無力感と恥立ちを感じていたのだろうか。それとも日々繰り返され続ける病の痛みがなんだか診療に疲れ果てていたのだろうか。

「Shame」作の教訓として自分自身を傷つけるという言語の貧困の現実や社会の不平等を前にした無力感、やり場のない怒りとして真実を表現する以外になかったのかもしれない。そうしていけば、毎週金曜の放課後、もにわにRichardに黒板消しという大事な当番を与えることはないだろう（Richardは“That was a big thrill. It made me feel important.”と感じていたのだ）。正解がないのは、そんな解釈も可能であることを教科書では伝えていた。

治らない病気の前に医師は何ができるかを探し続けた医師・原田重稔は「水戸の教訓を残していくために忘れでならない視点」として「第一は弱者の視点で考える」と述べる。また江戸時代の医師・蘭学者、緒方洪綱は「扶氏医戒之略」のなかで次のように述べている：

不治の病者も仍其思苦を寛解し、共生命を保全せんことを求むは、医の職務なり。棄てて省みるは人道に反す。ただ及び救ふこともざるも、之を望するは術非なり、片時も其命を延べんことを思ふべし。決して其不圧を告ぐべからず。言語容姿名の務を平ひ、之を悟らすむることなかれ」（下線は筆者）

大切なことは昔も今も変わらない。

物語を深く読み解くこととは他者理解や深い共感につながる。これは筆者が授業を通して得た実感である。英語スキルに加えて、感情移入するための物語に取り込む、医師として他者とつながることが何の意味なのかを考えて、考える機会を提供する医療学の果たす役割は、今後ますます重要になるのではないだろうか。

医師になるということ、あるいは自分がこの人生を生きていくこと、それはおそらく多元中の重層的な物語を自ら繰り広げていくことだろう。それは何无论に、自分はどんな物語をこれまで繰り広げて、そしてこれから先、他者の人生とどんな物語を織りなしていくのだろう。半期授業の最後は「Final Presentation」として「Who I am, and why I am here」というタイトルで各学生一人約5分間の発表（英語）で終える。このなかでは、自分が医師を目指すきっかけになった人生の出来事（本人のライフストーリー）、そこで得た自分の信念や価値観、さらに医師として将来自分が見たい世界あるいは創造していきたい世界について語ってもらう。世界と自分とのかかわりを述べてもらうのだ。発表は石畳混交。それまで。成熟を体験して内容であり、学生たちが自分の人生について自らの言葉で表現するのを聴くことは医師たちに尽きる。スキルとパートをもつ医者にならたいと願っているだろうか。
20. Becoming a doctor (in-house material at Kaohsiung Medical University in Taiwan).
‘Empathy’ in English as a lingua franca: How student doctors solicit concerns from simulated patients by turn-taking

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1. Introduction
The aim of this study was to investigate how student doctors convey empathy during simulated medical interviews in English as a Lingua Franca (ELF). Specifically, it examined how student doctors solicit and address simulated patients’ concerns via the process of turn-taking and managing turn construction. The data generated by conversation analysis revealed the micro-level of language practice and how it affects the process of empathic communication.

2. Previous studies
‘Empathy’ is a core element of satisfactory doctor-patient relationships and patient-centered care (e.g., Hojat, Gonnella, Mangione, Nasca, Veloski, Eradmann, Callahan, and Magee, 2002). As benchmarks for teaching empathy, empathy scales have been used in medical English teaching, such as The Consultation and Relational Empathy (CARE) Measure (Mercer, Watt, Maxwell, and Heaney, 2004). They are based on a broad definition of empathy concerning the doctor-patient relationship within the context of medical care. In CARE Measure, empathy is defined as capacity for communication: the ability to a) understand the patient’s situation, perspective, and feelings, b) to communicate that understanding and validate its accuracy, and c) to act on that understanding with the patient in a helpful way (ibid). It is an intellectual attribute to understand another person’s concerns, rather than just sympathizing with them (Hojat, 2007).

While coding tools such as Roter Interactional Analysis System (RIAS, e.g., Roter and Larson, 2002) define empathy as a direct statement on the emotional state of another person, empathy scales argue that what is perceived as empathic actually differs among individuals; doctors need to ‘respond to the unique needs, values and preference of individual patients’ during each medical encounter (Bonvivini et al., 2009: 4). It has been suggested that doctors should pay attention to their nonverbal cues such as appropriate touch, eye contact, body posture, and gestures as well as verbal interactions such as positive talk (Hojat, Louis, Fred, Markham, Wender, Rabinowitz, and Gonnella, 2011). However, these ‘encoding’ skills have received little attention, and their application to medical communication has been limited due to the cost and complexity of exploring them (Roter and Hall, 2011), although the use of nonverbal skills has a direct impact on outcomes of primary-care visits and patient satisfaction.

Conversation analysis can clarify how these micro-level language practices influence the doctor-patient relationship (e.g., Heritage and Maynard, 2006). It facilitates a clear understanding of what takes place during communication, and how interactional problems and solutions arise (Pilnick, Hindmarsh, and Gill, 2010). Although most robust studies have been conducted within a monolingual context, previous studies have revealed how turn-constructional behavior determines the course of interaction, facilitates conversation, and influences consequent behavior and outcomes of communication (Heritage and Maynard, 2006).

When exploring communication among speakers from different lingua-cultural backgrounds, ELF necessitates the application of conversation analysis to clarify the process of interactional achievement among ELF speakers. ELF is ‘a multilingual phenomenon’ (Jenkins, 2017: 10): ‘the common language choice, among speakers who come from different lingua-cultural backgrounds’ (Jenkins, 2009: 200) or ‘any use of English among speakers of different first languages for whom English is the communicative medium of choice’ (Seidlhofer, 2013: 7). Empirical studies revealed the process-
es that determine participants’ linguistic choices, rather than the frequent use of specific features (Jenkins, 2017). In ELF communication, communication breakdown rarely occurs, and we can observe participants skillfully employing various strategies to prevent communication problems (Cogo, 2012). One of those interactional processes is the strategy called accommodation, which refers to adjusting one’s speech to the other’s in order to facilitate communication and make it more intelligible (e.g., Giles and Coupland, 1991). ELF speakers 'accommodate' their speech to overcome potential difficulties in naturally occurring conversation (Cogo, 2012) and show solidarity (Jenkins, 2000).

Numerous studies have investigated doctor-patient communication and intercultural communication, respectively; however, studies on doctor-patient communication in a multilingual, multicultural context are surprisingly sparse. This study aimed to clarify how the goals of medical interviews can be achieved during transient encounters. In this report, we give the initial stage of analysis at the patient’s presenting complaint stage, and a detailed analysis of a case based on a single medical interview in a medical English classroom.

3. Data

The present data were derived from 14 medical interviews conducted in a medical English classroom at a Japanese university. The participants were 20 student doctors and 8 simulated patients from different lingua-cultural backgrounds. The data were audio-visually recorded, and transcribed according to the methodology developed by Jefferson (e.g., Atkinson and Heritage, 1984). Data collection was approved by Academic Research Ethical Review Committees of the university. The names and identifying characteristics of the participants were changed. In the following analysis, we present a typical case.

4. Analysis

Overall, medical interviews proceeded cooperatively and collaboratively without any communication breakdown. The student doctors received positive comments on their performance from simulated patients, although some did not make direct statements on patients’ emotional state. Conversation analysis revealed their skillful use of both verbal and nonverbal features to facilitate accommodation and, consequently, 'empathic' turn-construction.

Excerpt 1 is a typical example of accommodation. In this interaction, there are two student doctors, Rei and Shu, and one simulated patient, Amy. In this case, Amy has a terrible headache. Rei gradually accommodates his turn organization to the simulated patient’s preference. As a result, at the end of this encounter, he receives positive feedback from the simulated patient, although he does not directly refer to her emotional state.

Excerpt 1

1 Rei: All right, so how can I help you today?
2 Amy: Right actually I have a terrible headache
3 right now.
4 Rei: (looking at Amy) Headache (.) right now
5 (.) (nodding) alright (looking at file and
6 writing down)
7 Rei: ok
8 (2 sec)
9 Rei: (looking at Amy) so (.) (nod) (.) (eyes
10 down) you think it’s fine to (1 sec) (looking
11 at Amy and moving his hand) umm (.) do you
12 think it’s fine to talk about [it your
13 Amy: oh [yes of course]
14 Rei: headache?]
15 Amy: of course [of course, of course]
16 Rei: [would you like to lie]
17 (looking at bed) down?
18 Amy: I can [talk to] you [thank you] very
19 Rei: [ok?] [alright]
20 Amy: much.
21 Rei: (nodding)
22 Rei: So your headache(,) [umm] (nodding)
23 Amy: [um um] (nodding)
24 Rei: since when
25 Amy: well, since last night

In this interaction, we can observe bilateral accommodation. Firstly, Rei attempts to solicit the patient’s concern by following the instruction of CARE Measure, “letting patients talk”, by explicitly flagging the completion of his turn with a pause, eye gaze, and increment as prompts for Amy to take her turn at the Transition Relevance Place (TRP). On the other hand, Amy shows a cooperative attitude toward his information-gathering task. Observing Amy’s behavior carefully, Rei accommodates his turn organization.

Rei’s attempts to prompt her to talk can be seen from lines 1 to 7. He uses eye gaze and explicitly shows the completion of his action by acknowledging her complaint by repetition and giving an understanding “ok” in line 7; however, these attempts fail to get her to talk. Instead, there is a two-second pause in line 8.

Rei interprets Amy’s silence and not taking the turn as an indicator of some problem. From 9 to 20, Rei attempts to resolve this. He gazes at her again and invites her talk in line 9, but this is again unsuccessful, so he checks whether she has some problem with talking about her symptom. In this process, he reformulates his question so that it is more relevant and clarifies what he is asking. Here, Amy’s immediate response indicates that it facilitates her answer and she has
no problem talking about her symptom. This process also shows that Amy is cooperative to help Rei conduct his work based on bio-medical concern, judging from her rejection of Rei’s addressing her life-world concern.

However, as shown in lines 21 to 23, even after confirming that she is comfortable talking about her headache, she still does not take her turn. Rei attempts to solicit her explanation again by re-topicalizing and displays TRP with the sign of completion and increment. Responding to this, Amy just nods, confirming that she understands his behavior as setting-up a topical agenda. Rei is waiting for her to talk by nodding together, but in line 24, he finally shifts his solicitation strategy to posing a more specific question: “since when?”

This type of solicitation is often seen as problematic as it limits the patient’s answer; however, in this interaction, Amy finally perceives this as fitted solicitation, as she answers without delay even in later sequences. This phenomenon is also observable in actual monolingual doctor-patient communication (e.g., Gill, 1998). In this interaction, patients understand the organization of the medical interview and are willing to be cooperative to facilitate the doctor’s information-gathering process. This is a common phenomenon.

For soliciting concerns, the participants use an accommodation strategy. Particularly, bilateral accommodation is salient in the organization of the talk. In this process, not only in this case, but also in other cases, student doctors must deal with unexpected responses from simulated patients, but they exhibit signs of attempting to solicit, skillfully using various verbal and nonverbal cues. They are also very aware of potential problems, particularly silence. They mostly interpret silence as a sign of a potential problem and attempt to resolve it immediately.

Overall, as the data in this study show, both student doctors and simulated patients cooperate to co-facilitate a successful medical interview, and they overcome linguistic and cultural differences by accommodation and repair. For empathic communication in ELF, student doctors adopt various strategies to solicit a simulated patient’s narrative, gradually accommodate their speech to the simulated patient’s preference, and are very keen to avoid potential problems. They frequently use constraining questions or repetitions, which have been viewed as limiting patients’ answers and signs of interlanguage in an English-dominant context and Second Language Acquisition, respectively, but based on micro-analysis of intercultural communication, they make different contributions to successful patient-centered communication.

5. Conclusion

This study advances understanding of the process of empathic doctor-patient communication in ELF. In further research, we will explore more solicitation and addressing strategies in later phases of medical interviews. Other points to consider are power-relation issues. As this analysis was conducted in a teaching context, we did not pre-define power-relations between participants; however, to promote understanding of the process of communication, their significance in ELF communication must be considered.

Acknowledgement

This project is partially supported by a Grant-in-Aid for Scientific Research: MEXT/JSPS KAKENHI Grant Number JP18K12469.
How many staff know about the Examination of Proficiency in English for Medical Purposes?

Questionnaire results of international patient management in Harasanshin Hospital

Yoichi Takaki
Harasanshin Hospital

1. Introduction

Harasanshin Hospital is located in the central business district of Fukuoka City, between Hakata Port and Hakata Station and about 6 km from Fukuoka International Airport. Consequently, we see some non-Japanese patients every day from all over the world, some of whom are inpatients. Given this situation, differing levels of foreign language skills among our staff result in many kinds of communication issues.

2. Background

As the number of non-Japanese patients has been increasing, some hospital staff seem to be stressed when they use foreign languages such as English. To solve this problem, some nurses resort to using dictionaries or translation software on their PCs or iPads. However, the precise causes of their stress are unknown.

Two tests of medical English skills in use in Japan now are the Examination of Proficiency in English for Medical Purposes (EPEMP) and the Certificate Examination of Medical Interpretation Skills (CEMIS). The EPEMP is managed by the Japan Society for Medical English Education (JASMEEE), and the CEMIS is managed by a branch of the Ministry of Health, Labour and Welfare. But these two examinations seem to be unpopular among our hospital staff.

These circumstances led me to ask three questions:

• How do medical staff feel about dealing with non-Japanese patients?
• What is the current medical English level of our staff?
• How many staff know about the EPEMP or the CEMIS?

3. Methods

We have an annual hospital meeting, and the 2017 theme was “Let’s think about communication with non-Japanese patients.” After the meeting, we asked staff to complete a 10-question questionnaire about their experiences of dealing with non-Japanese patients, and about their awareness of the EPEMP and the CEMIS.

4. Results

We looked at four groups: medical doctors, registered nurses, medical technologists, and medical assistants. Medical technologists include pharmacists, radiological technologists, medical engineers, dietitians, occupational therapists, and physical therapists. Medical assistants include receptionists, cashiers, medical clerks, and medical administrators. A total of 391 staff attended the meeting, and we received 218 responses, half being from registered nurses (Figure 1). The following seven questions, shown in bold type, were selected from the questionnaire.

4.1. Have you been in a situation where you had to deal with a non-Japanese patient?

As expected, about 80% of medical doctors, registered nurses, and medical assistants answered “Yes,” because they are front-line staff (Figure 2).

4.2. Were you able to communicate with the non-Japanese patient?

Excluding medical doctors, other groups, especially registered nurses, had difficulties communicating with non-Japanese patients (Figure 3).

4.3. What language is important to communicate with non-Japanese patients?

All staff answered that English is the most important. About a quarter of the staff also mentioned the importance of Korean and Mandarin (Figure 4).
4.4. Are you able to communicate with patients from English-speaking countries in English?

Excluding medical doctors, most of the staff answered “No.” Staff members realize the importance of medical English but they do not have enough skills (Figure 5).

4.5. Are you able to translate these Japanese words into English?

We asked our staff to translate ten Japanese medical terms into English. Medical doctors knew many words but still need to learn more. It seems that the majority of our staff do not know basic medical terms (Figure 6).
4.6. Do you know about the EPEMP?
Eight out of 218 (only 4%) staff knew about the EPEMP (Figure 7). Fifteen percent of medical doctors knew about the EPEMP, but it was virtually unknown in other groups. Medical doctors’ awareness rates were higher than in any other group (Figure 8).

4.7. Do you know about the CEMIS?
Twenty staff (9%) knew about the CEMIS (Figure 9), and medical assistants’ awareness rates were higher than those of any other group (Figure 10).

5. Discussions
Our findings indicated that registered nurses feel the most stress when they have to communicate with non-Japanese patients. We assume that one of the reasons is that medical technologists’ and medical assistants’ work is routine, but registered nurses have to deal with many kinds of medical situations. Most of the staff have difficulties communicating in English because they lack basic medical English vocabulary. Only 4% of staff knew about the EPEMP and 9% about the CEMIS. These levels were lower than I had expected. The awareness rate of the EPEMP was the highest among medical doctors, while the CEMIS was relatively well known to medical assistants. These findings suggest that awareness of the EPEMP as an academic certificate examination has spread mainly among medical doctors, whereas awareness of the CEMIS has been spreading mainly among medical assistants in our hospital.

6. Conclusions
Our profession recognizes the importance of medical English, but most of the staff do not have high enough skills. Ideally, we have to study English more, but decisions depend on individual learning abilities and motivation. As a short-term solution, translation tools might be useful.

The number of non-Japanese patients will continue to increase over the next few years. In order to prepare to communicate with them, I believe that we should actively publicize information about the EPEMP to everyone in the medical field in Japan. As a first step, I would like to suggest putting up EPEMP posters on the walls of all JASME members’ workplaces.
Make them do it! How to teach writing better by writing less

Christopher Holmes
Office of International Academic Affairs, University of Tokyo Faculty of Medicine

In a nutshell: ESL teachers can teach useful writing skills effectively by making students revise and resubmit, typed, what they wrote longhand in the classroom. To save time, teachers should neither score nor rewrite anything, but they should identify every single error in students’ writing using a kind of shorthand.

On July 28, 2018, I gave a talk at our 21st Academic Meeting (“How I mark papers: shorthand for quick correction of written work”) to share my system for saving time when correcting students’ written work in a high-volume, long-term teaching program that includes English composition for medical students. The following essay (a summary "plus alpha" as we say in Japan) explains the thinking behind my approach.

1. Introduction and disclaimers

My system for teaching English composition in a Japanese medical school is intended neither for journal editors nor for diarists and is only one of several possible approaches. We all understand that circumstances differ among medical schools and that not all teachers work in programs where English composition is taught. Still, it is axiomatic that wherever and however English composition is taught, it cannot achieve respectable results quickly, nor can it be taught solely through lectures, nor are writing skills improved merely by providing students with models of good writing on predictable themes.

Many kinds of input help, but writers learn to write only by writing. I require my students to write something at the end of every class, which I correct and return to them at the next class. My system for quick correction is one step in a months-long extended process that begins with quick explanations of differences between Japanese and English-language writing conventions and of the meanings of the symbols and marks I use as a shorthand for written communication with my students; variants of my shortcuts may be equally effective, provided they are internally consistent as a system and take into account the features and failures of the Japanese education system.

(A compendium of my marks is shown in Table 1.)

1.1. Focus on medical students’ “need-to-knows”

English courses in Japanese medical schools should not be focused on “getting a paper published in a medical journal.” Good curricula and good teaching depend on good timing: you don’t give sex education to five-year-olds. Even in the prestigious institution where I worked for almost two decades, to the best of my knowledge, out of well over one thousand students, only perhaps half a dozen published papers while they were medical students. No course or program should overlook the real needs of 99% of its students to give a veneer of excellence and spit-and-polish to the work of the top 1%.

Mine is therefore not a system for medical journal editing or for teaching “academic writing,” which in any event is pointless unless students have a solid grounding in English-language grammar and typographical conventions. There is no point in teaching academic stylistics if students cannot make verbs agree with their subjects or use pronouns and verb tenses correctly — not to mention dozens of other grammatical basics (including such intangibles unknown to the Japanese as margins and double-spacing).

1.2. Use it or lose it

But the basics are not necessarily simple. To learn all of this complex subject, students must be given time to acquire...
and apply writing skills. Much of this training ought to have been given at the school system's lower levels, but the fact is it was not. And no student, no matter how gifted, can master these skills overnight.

Even such basics as punctuation must figure in the program because [as I said in my previous presentation at the 20th JASMEE Academic Meeting, “Punctuation rules are not universal!”] even when punctuation marks appear to be identical, the rules governing their use and their usage are neither universal nor simple. And in the teach-to-the-standardized-test Japanese education system (which has its own peculiar merits, of course), many basic rules are simply never taught.

The writing exercise at the end of every class of mine is not a separate “writing class” but an integral part of that day’s listening, speaking, and reading components, every element of which is directly related to medicine, and ideally the writing exercise knits together the medical facts that students were exposed to during the class. (Whether and to what extent students make effective use of this opportunity, however, depends entirely on the student...)

1.3. The long haul

Systems used to teach writing must allow students to learn from their mistakes and apply what they have been taught over a period of several months, and this implies a heavy workload for teachers. What can be done to lighten the burden of this task, which is daunting for both students and teachers? Without omitting whatever inputs are necessary, the teacher must save time and mental energy at every step in the long process, while giving students every opportunity to learn — truly to learn in the full sense of the term — from everything they have been “taught.” Success is not guaranteed, even with this system and with the best intentions in the world, but it certainly benefits far more than 1% of the students exposed to it.

Let’s assume that our students are able to retain knowledge they acquire from their teachers and from experience: they are good students and they don’t have Alzheimer’s. We may also safely assume that they will retain knowledge better if they are given opportunities to use that knowledge. Facts are not particles that collide with each other in a milling swarm. When facts fit snugly into place in a network of

Table 1. Compendium of markings, symbols, and shortcuts for quick correction of written work

<table>
<thead>
<tr>
<th>Set 1</th>
<th>Though not universal, the marks in this set are pretty much “standard” in the English-speaking world: all are made using red ink and should be explained to all students to avoid misunderstanding.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Check marks (“ticks”)</strong></td>
<td>mean that something is <strong>GOOD!</strong> Xs of different sizes obliterating a letter, word, phrase, or passage indicate grammatical or factual mistakes. Put the X through whatever is incorrect: letter, prefix, word ending, punctuation mark... (Xs are not used to indicate misspellings, which have a separate marker: circling.)</td>
</tr>
<tr>
<td><strong>“Horizontal S”</strong></td>
<td>is lying sidewise, on their side, looping around two terms) reverse the order of the terms (e.g., to turn “put out” into “output”).</td>
</tr>
<tr>
<td><strong>Deletions</strong></td>
<td>are single lines drawn straight through the middle of (“crossing out”) unneeded passages, whatever their length.</td>
</tr>
<tr>
<td><strong>Question marks</strong></td>
<td>mean the teacher does not understand what the student has written. They should be interpreted as instructions to <strong>RETHINK AND REWRITE!</strong></td>
</tr>
<tr>
<td><strong>Single underlining</strong></td>
<td>(the customary type) draws attention to a letter, word, term, or phrase (for example, a question mark planted near the underlining queries the student abut a nonsensical phrase). (Compare this underlining with the “correlative underlining” in Set 2, the “homemade” section below.)</td>
</tr>
<tr>
<td><strong>Triple-underlining</strong></td>
<td>(three strokes resembling an underlined equals sign = placed under a letter or word) mean the lowercase letter(s) should be converted to UPPERCASE.</td>
</tr>
<tr>
<td><strong>Circling</strong></td>
<td>around words means the words are misspelled. Make students find the correct spellings themselves; this is the only way they will learn. Making them do this saves the teacher a lot of time.</td>
</tr>
<tr>
<td><strong>Asterisks</strong></td>
<td>(actually the symbol used is this: ✷) mean <strong>ASK me!</strong> An Asterisk is used for either of two time-saving reasons: (1) because writing out the explanation is time-consuming, or (2) because the same thing should be explained simultaneously to several people in the class.</td>
</tr>
<tr>
<td><strong>Swoshes</strong></td>
<td>are wispy curving lines that mean the student should delete the punctuation mark (usually a comma, a period, or quotation mark) they originate from. (Can anyone suggest a better name for this mark?)</td>
</tr>
<tr>
<td><strong>Correlative underlinings</strong></td>
<td>(an underlined part connected to another underlined part) mean that the two or more underlined parts are related in a way that the student has not understood. A change in one underlined place, for example, is what makes a change in another underlined part necessary.</td>
</tr>
<tr>
<td><strong>“Squigglies” or wavy lines</strong></td>
<td>mean that what is written atop the “Squiggly” or wavy lines has not understood. A change in one underlined place, for example, is what makes a change in another underlined part necessary.</td>
</tr>
<tr>
<td><strong>Parentheses</strong></td>
<td>(enclosing a letter, word, term, or phrase) mean that what is enclosed is unimportant or unneeded (and can be omitted).</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Set 2</th>
<th>The following “homemade” (non-standard) marks must unquestionably be explained!</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Circling</strong></td>
<td>around words means the words are misspelled. Make students find the correct spellings themselves; this is the only way they will learn. Making them do this saves the teacher a lot of time.</td>
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</table>
relationships, we call that Knowledge (one of my students’ favorite words, and often slightly misused in their writing). Learning leading to knowledge is reinforced by repetition. These are all well understood commonplaces, of course. But are they observed in the way we teach?

1.4. Don’t count, do what counts.

What is the teaching process? My students write something at the end of every class. The mantra that “evaluation drives learning” echoes in the halls of medical academe. But what purpose does it serve to spend time affixing a score to each of 110+ students’ weekly compositions? I don’t know. I do know that it takes time. So I don’t score their written work. (But I do keep copies of everything they’ve written, partly as evidence that they attended the class and, in some cases, that they paid attention.)

I don’t count their errors and score their written work, I correct by marking whatever they decided to write. I don’t rewrite it, but I help them to improve their writing, whatever its level.

What I do is, in other words, a kind of editing, involving deletions, additions, rearrangements, and other suggestions. That takes time already. So my proposal to fellow teachers is “MARK, DON’T SCORE!” Just show students where they’ve made mistakes. They are in medical school presumably because they are thoroughbreds: they have been bred to fear making mistakes. That is one feature of the Japanese education that can be used to teach them something useful in real life. Putting Xs in red ink all over their paper sends a message that they notice. Don’t allow them to turn the sheet over to hide it, “file” it in the trash can when they get home, make the same mistakes next week, and give you “déjà vu” all over again.

They may not know why something is wrong, and they may even misinterpret the marks you use. That’s not their fault. So as I said in my talks last year and this year, you must explain that a check mark means that something is good. And stress that an X anywhere indicates an error. But do they know why it’s wrong? That’s something that you also need to teach them.

2. How can students learn without asking questions?

You need a shorthand mark to cue the student to ask for an explanation. Because I’m graphically challenged, I don’t want to spend time drawing a little star: *. Instead, I scribble an X and put dots between its legs, like this: ☒ (resembling the auspicious Japanese kanji for rice). This is quicker and easier to write and suffices. Though it isn’t really one, I call it an asterisk, which means “little star” in Greek. Tell the students emphatically, “Asterisk” means “ASK!” and they enjoy the joke.

This shorthand saves you the time needed to write explanations in margins, and one asterisk can serve to alert several students to the same mistake or problem.

But there’s a quid pro quo: although it saves time at the correcting stage, it requires the investment of some class time every week to drive certain grammatical points home.

I acknowledge that many students dislike this part of the process — and also that I regard their objections as sheer selfishness, because unless you spend time “explaining asterisks,” you might as well be writing corrections and comments in invisible ink.

The smaller the classes, the less friction is caused by this dislike of “asterisk time,” but I do it in all classes because I’m explaining things that all medical students need to know. For one semester I am a one-man medical English department for every single student. The process works out for most students, most of the time, because in my second-semester classes (when I teach only half as many students, in smaller classes — while the others are taught other things — but not writing — by part-time teachers), my students are more accustomed to the routine and conscious of its benefits (and almost all of them asked to remain in my class for the second semester, knowing that I’m the only teacher who specifically teaches them writing). It seems that if they have applied themselves diligently for weeks in the first-semester English classes, they realize that this process helps them to improve their writing.

2.1. The paradox of time spent versus time saved

Even if students cooperate and disclose at “asterisk time” the presence of asterisks on their returned papers, as they were told to (which they’re not always keen on doing), and even if they nod and say they understand when they listen to my explanations, they are not applying what they’ve learned unless I force them to revise and resubmit all their written work. Without revision and resubmission, the whole process is meaningless.

Isn’t this adding to the teacher’s work, not saving time? Well, yes and no. I force students to resubmit all their written work (although not all of them comply) because I hate to waste my time. Even with my quickie-correction system, I spend considerable time correcting their written work, but I accept that because I am confident that it will help them. I am also fairly certain that they will repeat their errors unless they actually learn from my corrections by copying, correcting their errors themselves, and resubmit-
ting. Plus, they learn how to type according to English-lan-
guage conventions (double-spaced, with adequate margins,
on A4 paper) in the bargain. These are things they need to
know. So I accept the added burden.

But it’s not as bad as it seems. My reviewing their work a sec-
ond time in printed form is much less onerous than it would
be if everything were handwritten (as the first drafts written
in the classroom were, unavoidably), and of course the ver-
sion the student has revised is better, therefore quicker and
easier to correct if further correcting is necessary.

Interestingly, it is at this stage that the true excellence of
the best students becomes apparent, and the incompetence
of the poorest students is exposed: some students seem to be
incapable of even copying correct writing correctly. How did
these students get into a prestigious medical school? Answer:
by doing well on a standardized test that takes no account of
certain basic skills needed for success in the real world.

3. The bottom line: nothing comes
easily, but there’s a payoff.

Without revision and resubmission, the whole process
would be meaningless. My theory (or rather, my firm belief
based on decades of experience, not a measurable or experi-
mentally proven fact) is that, by investing a little time initially
in my quickie-correction method, I have saved myself a lot of
time in the long run and taught most of them something they
surely need to know. It requires that I spend precious time
explaining my marking system and rules when the first cor-
rected papers are returned to students, usually in the second
week of the program. From then on, it requires that students
revise and resubmit, typed, everything they wrote longhand
in the classroom. The volume of paperwork snowballs, but it
makes the students correct their own mistakes, makes them
sensitive to real English grammar, and makes it less likely
that they’ll make those same mistakes again and again (as
they had been doing for perhaps six to eight years in their
previous English classes). In short, I believe they actually
learn, and I feel that correcting their written work becomes
easier — and more satisfying. Quite a few students begin to
write stuff that is truly interesting, and I learn things from
them. Docendo discimus (“We learn by teaching,” one of my
favorite Latin proverbs).

I call it my system because I use it and I invented parts of it
without guidance from anyone. But now it is yours if you
choose to use it, knowing the trade-offs. Feel free to do so
and share it with others. And I look forward to hearing from
you about whether and how it works for you.
Move analysis of English medical papers and its application to the writing of the Introduction and Discussion sections

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Research papers consist of common word units, referred to as moves, that help express the writer's meaning and purpose. This study shows how move analysis of English medical papers can be useful in understanding the current themes in an article to support the creation of future papers based on those themes. We divided 395 articles from leading medical journals into 12 moves. Using AntConc software for textual analysis, we identified the keywords for each move and extracted the phraseological patterns found in the Introduction and Discussion sections of the articles. These specific phraseological patterns can help the readers understand the article content. By referring to the present results, English medical writers can better understand the flow of discourse, and therefore, they can construct papers using typical phraseologies for their subject matter.

Keywords: move analysis, genre, corpus, keyword, phraseology, English medical paper

1. Background

Genre studies have established the notion of moves, which are "units that relate to the writer's purpose and to the content that s/he wishes to communicate (p.89)." Moves are used to achieve the communicative purposes in a given context to promote the understanding of the flow of discourse. Corpus linguistics plays an important role in analyzing language, especially the notion of phraseology as lexical units of meaning. It can be assumed that English medical articles share common moves, and therefore, corpus studies are able to identify the phraseology associated with their functions.

In this study, we collected data from four leading medical journals and divided them into 12 moves according to the rules defined by Nwogu. After calculating the most frequent grammatical keyword in each move by using AntConc (Version 3.4.4), we extended the search to collocated words and identified typical phraseologies strongly related to the move functions. The usefulness of the collocated words obtained in this study was confirmed using the Life Science Dictionary (LSD) corpus (https://lsd-project.jp/cgi-bin/lsdproj/conc_home.pl?opt=e).

2. Moves and corpus data

2.1. Moves

Each article was divided into 12 moves during the data collection process. These moves were based on the classifications developed by Nwogu. Table 1 illustrates the three moves related to the Introduction and Discussion sections, respectively.

These moves represent the typical elements in the Introduction and Discussion sections, and they may be useful in recognizing and understanding the essential elements of medical research writing.

2.2. Corpus data

This section illustrates the source of the corpus data used in this study. We collected 395 articles published from 2013 to 2014 in four major journals: New England Journal of Medicine (NEJM), The Lancet, British Medical Journal (BMJ), and Annals of Internal Medicine (AIM). The collected articles were divided into 12 moves, and each section was analyzed in light of these particular moves. Table 2 shows the number of words in the corpus data of the Introduction and Discussion sections.
sections. We established that the data size was sufficient to conduct a move analysis.

3. Phraseological patterns in the Introduction and Discussion sections

3.1. Phraseological patterns in the Introduction

AntConc (Version 3.4.4) was used to analyze the corpora of moves in the Introduction. Table 3 shows the list of keywords preferentially used in each particular move.

AntConc was used to investigate the words collocated with the keywords. The frequency of use was also analyzed with the million-word LSD corpus, which is 100 times larger than that of the corpus collected in this study.

3.1.1. MOVE 1

First, the verb *is* functions as the signal for illustrating the topic of the article. The recurrent language patterns of the phraseology (1) are shown in Table 4. Words separated by a dotted line can be switched depending on the context. The phraseology provides readers with useful information about the article’s focus.

In order to exemplify Move 1, a sample sentence is supplied below.

**Sample 1**: Metastasis is the most common cause of death in cancer patients.

The phraseology (2) is used to refer to the problem which the article will solve (Table 5). This phraseology contains the verb *remain(s) or be*. Remain plus an adjective can be used to establish important research problems.

In order to exemplify Move 1, a sample sentence is shown below.

**Sample 2**: However, the mechanisms remain unclear.

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### Table 1. Moves in the Introduction and Discussion sections

<table>
<thead>
<tr>
<th>Move</th>
<th>Introduction</th>
<th>Discussion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Move 1: Presenting Perspective Frame</td>
<td>Move 10: Highlighting Overall Research Outcome</td>
<td></td>
</tr>
<tr>
<td>(1) Important established knowledge</td>
<td>(1) Main results</td>
<td></td>
</tr>
<tr>
<td>(2) Main research problems</td>
<td>(2) Conclusion</td>
<td></td>
</tr>
<tr>
<td>Move 2: Presenting Related Research and a New Approach</td>
<td>Move 11: Explaining Specific Research Outcome</td>
<td></td>
</tr>
<tr>
<td>(1) Related previous research</td>
<td>(1) Interpretation of the outcome</td>
<td></td>
</tr>
<tr>
<td>(2) Limitations of previous studies (problem)</td>
<td>(2) Comparison with previous research</td>
<td></td>
</tr>
<tr>
<td>(3) New approach / new idea</td>
<td>(3) Limitations</td>
<td></td>
</tr>
<tr>
<td>(1) Thesis statement (purpose)</td>
<td>(1) Conclusion</td>
<td></td>
</tr>
<tr>
<td>(2) Main research procedure</td>
<td>(2) Perspective, future plans</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2. Corpus Data

<table>
<thead>
<tr>
<th>Move</th>
<th>NEJM</th>
<th>The Lancet</th>
<th>BMJ</th>
<th>AIM</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOVE 1</td>
<td>8,573</td>
<td>10,430</td>
<td>11,622</td>
<td>8,850</td>
<td>39,475</td>
</tr>
<tr>
<td>MOVE 2</td>
<td>14,254</td>
<td>19,204</td>
<td>21,669</td>
<td>17,202</td>
<td>72,329</td>
</tr>
<tr>
<td>MOVE 3</td>
<td>5,563</td>
<td>6,739</td>
<td>7,411</td>
<td>5,927</td>
<td>25,640</td>
</tr>
<tr>
<td>MOVE 10</td>
<td>14,627</td>
<td>16,435</td>
<td>18,385</td>
<td>16,708</td>
<td>66,155</td>
</tr>
<tr>
<td>MOVE 11</td>
<td>60,558</td>
<td>87,709</td>
<td>103,205</td>
<td>76,527</td>
<td>327,999</td>
</tr>
<tr>
<td>MOVE 12</td>
<td>7,609</td>
<td>13,548</td>
<td>20,008</td>
<td>9,706</td>
<td>50,871</td>
</tr>
<tr>
<td>Total (MOVES 1-12)</td>
<td>329,956</td>
<td>358,349</td>
<td>380,042</td>
<td>321,064</td>
<td>1,389,411</td>
</tr>
</tbody>
</table>

### Table 3. Keywords in the Introduction

<table>
<thead>
<tr>
<th>MOVE 1</th>
<th>MOVE 2</th>
<th>MOVE 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 IS</td>
<td>591</td>
<td>1 HAV</td>
</tr>
<tr>
<td>2 HAS</td>
<td>228</td>
<td>2 HAVE</td>
</tr>
<tr>
<td>3 UNITED</td>
<td>102</td>
<td>3 IS</td>
</tr>
<tr>
<td>4 ARE</td>
<td>345</td>
<td>4 BEEN</td>
</tr>
<tr>
<td>5 HAVE</td>
<td>327</td>
<td>5 STUDIES</td>
</tr>
</tbody>
</table>
3.1.2. MOVE 2

Move 2 serves to review related studies and to explain the limitations of previous research. The phraseology (3) illustrates recent studies related to the article (Table 6). The present perfect tense is used to introduce previous studies.

In order to exemplify Move 2, sample sentences are given below.

Sample 3: Diabetes has been associated with an increased risk of vascular disease.

Sample 4: Previous studies have shown that ____.

After the authors have introduced the previous studies, the following discourse of the phraseology (4) can begin to mention the limitation of those studies (Table 7). However is one of the most important keywords for presenting problems in Move 2.

Sample 5: However, it remains unclear whether ____.

3.1.3. MOVE 3

Move 3 illustrates the contents of the article that include the goals and main methods of the research. The phraseology (5) describes the main purpose of the article with the adjunct here or in this study (Table 8). In general, the present tense is used in sentences that begin with Here.

In order to exemplify Move 3, a sample sentence is shown below.

Sample 6: Here we report the results of a phase II trial.

After clarifying the problem of previous studies, the adjunct therefore is used in the phraseology (6) to indicate what the authors conducted in this study (Table 9). Medical writers often prefer to locate therefore at the beginning of a sentence.

In order to exemplify Move 3, a sample sentence is given below.

Sample 7: Therefore, we investigated the role of this signaling pathway.
3.2. Phraseological patterns in the Discussion section

The phraseologies associated with the function of moves in the Discussion section, which were analyzed using AntConc, are given in this section. Table 10 shows keywords and their frequency in the corpora. These keywords were used preferentially in a particular move compared with the corpus data as a whole.

These keywords are analyzed in the following section.

3.2.1. MOVE 10

This section will provide the account for the use of that, which was the top-ranked grammatical word in Move 10. Move 10 highlights the overall research outcome by employing clauses starting with the grammatical item that as objects of verbs such as show and suggest (Table 11). That often co-occurs with subjects such as our findings and our results.

In order to exemplify Move 10, a sample sentence is included below.

Sample 8: Our findings show that _____

3.2.2. MOVE 11

Move 11 has many functions that explain specific research outcomes while interpreting the outcomes, indicating their significance, contrasting with previous studies, and indicating the study limitations. The grammatical item our plays an important role in explaining the results of the present study as shown in Table 13. In many cases, our is used to express a comparison between the present study and previous studies.

In order to exemplify Move 11, a sample sentence is given below.

Sample 9: These results are consistent with previous observations.

3.2.3. MOVE 12

The functions of Move 12 are to state research conclusions, indicate the research implications, and promote future research. In addition to the grammatical item should, several useful optional lexical patterns and phraseologies were also found.

More than half of the articles reviewed begin with In conclusion or In summary (Table 15).

Following the optional words above, the phraseology (11)
is associated with the research conclusion (Table 16).

In order to exemplify Move 12, a sample sentence is shown below.

**Sample 11:** In conclusion, our results suggest that _____.

In addition, the phraseology (12) is used to show results found in the article (Table 17). Evidence is the most important part of a research article.

In order to exemplify Move 12, a sample sentence is shown below.

**Sample 12:** Our results provide strong evidence that _____.

Finally, the grammatical item *should* is used with the adjective future for the purpose of suggesting further study (Table 18). Future research is always important for scientific work.

In order to exemplify Move 12, a sample sentence is shown below.

**Sample 13:** Future research should focus on the effect of the drug.

### 4. Limitations and Conclusion

This study has shown the relationship between "moves" and the language used to enact their roles in research writing. These phraseological patterns are useful to help improve authors’ communicative abilities, which will serve to assist readers in their overall understanding of academic medical writing. Therefore, writers of English language medical research papers should understand and use the flow of discourse, or "moves," as referred to in this study.

Furthermore, as Sinclair says,4 "a corpus should be as large as possible, and should keep on growing (p.18)." This suggests that to be of real help to authors of medical research papers and their readers, additional studies will be needed to collect more move analysis data.

### References


### Corpus tool

1. Introduction

With the number of visitors from abroad increasing recently, foreign patients’ visits to Japanese hospitals have also risen; especially in big cities. Hospitals in the Shikoku area have thus been receiving a larger number of patients than before over the past 5 years (though not as large a number as major cities like Tokyo or Osaka). Therefore, Shikoku Central Hospital decided to offer Medical English Conversation (MEC) classes to help enable its nurses and doctors to deal with situations in which English is required. There were 2 types of foreign patients who visited the hospital. One was a group of workers at papermill factories in Shikoku Central City. They were from the Philippines, China, Vietnam, and other Asian countries. The other was a group of pilgrims called Ohenro-san in Japanese, who were journeying to 88 famous temples in Shikoku. Most of the pilgrims were from the United States, Canada, and some European countries. Shikoku Central Hospital set up the MEC program and requested that Giovanni Inc. provide instruction. We had 2 aims for this study: 1) to research how the nurses and the doctors approached MEC, and 2) to consider their problems and improvement plans from the viewpoint of medical English education.

2. Materials and Methods

2.1. The outline of the MECCs

BACKGROUND AND PURPOSES: Shikoku Central Hospital (Ehime, Japan) offered medical English conversation classes (MECCs) to its nurses and doctors biweekly for 6 months. The purposes of this study were to research their approaches to MECCs and to consider the problems they faced and possible solutions from the viewpoint of medical English education.

MATERIALS AND METHODS: Four nurses on average learned basic expressions, mainly in a history-taking section of their textbooks, by role-playing for 6 months. Also, 6 doctors on average learned basic expressions through engaging in role-playing and listening exercises for 6 months. The doctors’ class had a section devoted to examining foreign outpatients, as well as a section on making presentations at international medical meetings.

RESULTS: The nurses’ class saw a gradual decrease in the number of attendees for a couple of reasons. Moreover, there were some problems in using interpretation apps when talking to foreign patients. The doctors’ class maintained high motivation in all areas and was completed successfully; still, it registered low attendance by residents and saw little demand for the presentation section.

CONCLUSIONS: Increasing opportunities for attending MECCs, improving basic English skills, and raising motivation to study MEC are needed for the nurses’ class. Reinforcing listening skills, improving speaking skills with the help of English-speaking “patients,” and inviting young doctors and residents to MECCs should be considered for the doctors’ class. MEC learners need to learn general English conversation skills and should not rely on interpretation apps excessively.

Keywords: Medical English conversation (MEC), interpretation apps, raising motivation, English speaking “patients”
Table 1 shows the outline of the MECCs. We offered 1.2 50-minute lessons biweekly over 6 months in 2016 for the nurses’ class and in 2017 for the doctors’ class. The average number of the attendees was 4 in the nurses’ class and 6 in the doctors’ class. The hospital paid all fees for the participants.

2.2. The nurses’ class

The following textbooks were used for the nurses’ class: *Vocabulary Building for Nurses: Common Phrases at the Hospital* (Hishida H. and Fukaya K., Medical View Co., Ltd., 2009) and *Medical Terms and Expressions Everybody Uses*, 3rd edition (Fujieda K., Tamamaki K., and Mann R. W., Medical View Co., Ltd., 2013). The nurses learned basic expressions that are required when talking to foreign outpatients, with the covered items being composed of reception services before and after examinations, emergencies, tests, history taking, assisting physical examinations, general instructions, and treatment. The history-taking part, which was the most important section for nurses, involved studying expressions regarding chief complaints, present illnesses, past histories, and family histories. The nurses engaged in repetition of each selected expression from the books using the affiliated CDs followed by role-playing exercises.

2.3. The doctors’ class

The doctors’ class was made up of 2 parts: examining foreign outpatients (9 lessons) and making presentations at international medical meetings (3 lessons). Starting with examining foreign outpatients, the doctors learned basic expressions for medical examination through audio repetition exercises using *Vocabulary Building for Doctors: 500 Common Phrases at Outpatient Clinic* (Uemura K., Oi S., and Hollister P., Medical View Co., Ltd., 2007). Then, the doctors took part in role-plays using *Eigo De Shinryo Naika Kei* (Sakao F. and Conroy R., Kinpodo Co., Ltd., 2014) and *Eigo De Shinryo Geka Kei* (Sakao F. and Conroy R., Kinpodo Co., Ltd., 2016). The diseases were cholelithiasis, hypertension, influenza, chickenpox, acute cystitis, gonarthrosis, and appendicitis. Finally, the doctors participated in listening exercises using *At an Outpatient Clinic: Communicating in English with Non-Japanese Patients* (Wyse N. E. and Kobayashi H., Medical View Co., Ltd., 2014). As the last exercises aimed to accustom them to various English accents, we chose dialogues between doctors and standardized patients from six different countries: the Philippines, Mexico, Israel, Nigeria, New Zealand, and Indonesia.

When making presentations at international medical meetings, the doctors focused on the Q&A session, along with registration and greeting others through repetition exercises drawn from the CDs accompanying their textbooks, which were *Vocabulary Building for Doctors: 500 Common Phrases at Scientific Meetings* (Oi S., Uemura K., and Hollister P., Medical View Co., Ltd., 2007) and *Quick and Effective English Phrases for Use at the Scientific Meetings* (Date I. and Minton T., Medical View Co., Ltd., 2015). Doctors enjoyed engaging in free conversation, as it helped improve their fluency both at the beginning and the end of each lesson.

3. Results

3.1. The nurses’ class

The nurses’ class started with 10 attendees, but after a gradual decrease, it finished with only 3 participants. There were 3 factors that led to this decrease according to the nurses’ statements: irregular work shifts, an insufficient level of English needed for MEC, and poor motivation. When the nurses’ class started, everybody was eager to study MEC. However, the nurses’ irregular work shifts prevented them from attending the lessons. Moreover, soon after the class opened, many of the nurses realized that they did not possess enough basic English knowledge to cope with MEC. Many of the nurses felt awkward about attending the lessons after repeated absences. However, there were some exceptions. Two of the nurses were quite successful in taking on the challenges of learning MEC, and 1 of them is now studying English in London (Figure 1).

The nurses’ class finished, a Filipino man was admitted to Shikoku Central Hospital for an operation for cholelithiasis. As the first writer (M.I.) became a medical interpreter...

<table>
<thead>
<tr>
<th>Table 1. Outline of the Medical English Conversation Classes</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Nurses’ class</strong></td>
</tr>
<tr>
<td>Duration</td>
</tr>
<tr>
<td>Time</td>
</tr>
<tr>
<td>Date</td>
</tr>
<tr>
<td>Total class number</td>
</tr>
<tr>
<td>Average attendee number</td>
</tr>
<tr>
<td>Fee</td>
</tr>
</tbody>
</table>

1) Decrease of the attendees! (10 –> 3)

Related factors:
- Irregular work shifts
- Insufficient level for medical English conversation
- Poor motivation

2) Some exceptions

Two of the nurses showed great motivation to study medical English conversation.

Figure 1. Results of the Nurses’ Class

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for him while he was in the hospital, we had a chance to see how the nurses utilized the phrases they had learned in their lessons when taking care of him. During his hospitalization, the nurses used some interpretation apps (EX Language Nurse by SKWORD Co., Ltd.) on their smartphones to talk to him. Although the nurses could find the English sentences they wanted to say on the apps, they were not sure whether their delivery reached the patient, given their lack of confidence in pronunciation. Furthermore, they had a hard time understanding the patient’s replies because of poor listening skills.

3.2. The doctors’ class

The overall situation of the doctors’ class was more favorable than that of the nurses. Eleven people registered for the doctors’ class (4 surgeons, 2 physicians, 2 pediatricians, 1 urologist, and 2 residents). Although the residents attended only the first 2 lessons, many of the doctors attended almost all the lessons and expressed high motivation. Unlike the nurses, the doctors did not hesitate to use textbooks to learn basic expressions. They learned many words and phrases and finished the class smoothly. As the 12 lessons were not sufficient for the doctors to learn MEC and they wanted to learn more, Shikoku Central Hospital intends to start a new class soon to satisfy this demand. In the new class, English-speaking “patients” are going to help with doctors’ learning in the medical examination part of the process (Figure 2).

We would also like to report on the part of the class devoted to examining foreign outpatients. There are 2 things to be mentioned. One is that the doctors’ listening skills were inferior to their speaking skills. While the aforementioned Filipino patient was hospitalized, some doctors were able to convey their instructions to the patient. However, they had difficulties in comprehending the patient’s replies from time to time. The other issue was that the doctors tended to use technical terms instead of general terms when they examined foreign patients. For example, they said “cholelithiasis” for “gallstones,” “hemorrhage” for “bleeding,” “axilla” for “armpit,” etc.

In the part of the class devoted to making presentations at international medical meetings, we focused on the Q&A session, which was the hardest section for Japanese doctors, to provide them with basic expressions. However, only half of the doctors attended the lessons. We consequently found out that not all of the doctors were interested in making presentations in English; moreover some of the doctors might have wanted to take part in hands-on exercises, not just textbook-based learning.

4. Discussion

There are 3 problems to discuss regarding the nurses’ class. The nurses had 1) irregular work shifts, 2) an insufficient level of English for MEC, and 3) poor motivation. Regarding the first problem, there should be a way for the nurses to attend lessons despite their irregular work shifts. One idea is to provide nurses with the same lesson a couple of times a week, if finances permit, so that they have increased opportunities to attend. As to the second problem, which is the nurses’ insufficient level of English for MEC, nurses need to develop basic English conversation skills before they move on to MEC. Several reports have shown similar situations to ours.1-3 Capper et al. mentioned that competence in English requires that practicing nurses acquire both formal medical English knowledge and the ability to speak and comprehend informal English.1 A possible solution is to change the content of the first half of the nurses’ lessons to basic English conversation. Regarding the third problem (the nurses’ poor motivation), we propose using the Examination of Proficiency in English for Medical Purposes (EPEMP). If hospitals adopt EPEMP as 1 of the requirements for nurses being granted promotions or pay raises, motivation will increase.

We would now like to discuss 3 present issues concerning the doctors’ class. Specifically, this class needs to 1) reinforce listening skills, 2) improve speaking skills, and 3) have young doctors and residents attend MECCs. As regards the first situation, we are going to have doctors review the listening materials with the audio scripts of the previous term down to the details until they follow each conversation between doctor and patient without the scripts. Regarding the second situation (improving speaking skills), having the doctors engage in role-playing exercises with English-speaking “patients” would be effective. Their exercises could start with scenarios, but we would ultimately like to try exercises without any description. This would mean that the exercises begin with a situation in which the doctors only have rough information concerning the patients’ vital signs, chief com-
Institutions are starting to explore the possible applications of creating a new class only for young doctors and residents attending MECCs. This is because when training healthcare students, young doctors and residents might be under pressure in such a class. Willey et al. showed interesting outcomes at institutions where MECCs were offered, with their report demonstrating a greater number of obstacles to participation in in-service English programs when compared with the own research. According to the study, the main obstacle for medical doctors appears to be a lack of time, and, for registered nurses, having not/hardly used English at work. Furthermore, we would like to propose that young doctors and residents take EPEMP to improve their medical skills and motivation, and that more medical English questions should be included in the National Medical Practitioners Qualifying Examination.

Regarding the doctors’ use of technical terms, Smith et al. conducted surveys to discover student attitudes toward the acquisition of technical terms and the use of smartphone applications. Their report mentioned that they had tested the use of technical terms and lay terms in classes in 2016 and found the materials to be effective. Although the target group of that paper was composed of pharmaceutical students, we assume that the method mentioned would be applicable to doctors.

After finishing the MECCs, we resolved that we need to recommend studying MEC not only to nurses and doctors but to all healthcare specialists. The reason is that MEC is easy to study given its abundance of common expressions. Moreover, studying MEC will lead to good treatment for patients.

The relation between MEC and general English conversation as the base of MEC should be evaluated. Although healthcare specialists are not required to speak English fluently like native speakers, they need to share necessary information accurately with patients and show empathy. This means that healthcare specialists’ general English conversation level should be sufficient to carry out their tasks properly. Having a good command of general English is the base of MEC, yet it is the hardest part for healthcare specialists to acquire. Once they establish the foundation of general English conversation, it is easy for them to learn MEC, as it has a lot of common expressions, most of which are concise and easy to remember. In that sense, private language schools like ours are willing to assist in their learning of general English conversation. Regarding MEC, Pavel noted that medical teachers may feel uncomfortable with their “lack of skills in medicine, but the technical terms cause no problem for students.” The teacher must be an expert in Medical English, not in Medicine. Pavel also stated that developing language skills through discussions and debates around general themes was 1 of her aims in terms of reaching realistic goals in her English classes for medical students.

We would now like to reconsider interpretation apps, as previously referenced in the nurses’ section, with O’Connor and Andrews suggesting the use of smartphone apps in clinical education in their reports. It is often said that interpreters and translators will disappear as artificial intelligence (AI) develops. In the world of medicine, if healthcare specialists use the interpretation apps properly, they may not need to speak English to communicate with patients. If so, healthcare specialists do not need to devote a large amount of their precious time to studying MEC. However, we assume that a good command of English for medical purposes is going to play a more important role when AI is widely available. Although interpretation apps are very convenient, they have their limitations as gadgets and cannot always be correct. In other words, people will be still suspicious about the accuracy of AI. Only healthcare specialists with enough knowledge of MEC can recognize whether the sentences provided by the apps are appropriate or not. Therefore, the greater MEC skills healthcare specialists have, the better the interpretation apps will work for them.

5. Conclusions

Based on our experiences, we have reached several conclusions. Three modifications are needed for the nurses’ class and the doctors’ class, respectively. For the nurses: 1) increasing opportunities to attend MECCs, 2) improving basic English skills, and 3) raising motivation to study medical English conversation. For the doctors: 1) reinforcing listening skills, 2) improving speaking skills with the help of English-speaking “patients,” and 3) inviting young doctors and residents to MECCs. Furthermore, it is important for healthcare specialists to have a good command of general English.
specialists to establish secure general English conversation skills as the foundation of MEC. Finally, placing heavy reliance on interpretation apps should be restricted for the sake of accuracy.

Acknowledgements
We are grateful to Masashi Ishikawa, M.D., Ph.D. of Shikoku Central Hospital for supporting us regarding MEC programs and giving us excellent feedback on language usage in the medical field.

References
A pilot study of medical English language learning materials using virtual reality and a communication robot

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The aim of this paper is to report a pilot study of medical English language learning materials for medical students using virtual reality (VR) and a humanoid communication robot. VR makes it possible to simulate clinical situations with immersion for the student without the constraints of a clinical encounter. A humanoid communication robot allows interactions between a human and a machine, and studies have suggested that communication with a robot can be simpler and less stressful than with a person. To combine the features of VR and a robot, we developed new medical English language learning materials. This pilot study was conducted with six students who were scheduled to participate in an overseas training program in the Philippines. The results of a post-trial questionnaire suggest that the combination of VR and a robot helps the students learn medical English comprehensively compared to more traditional materials such as a tablet and paper handouts.

Keywords: medical English, communication, robot, virtual reality, trial

1. Introduction

The importance of the English language for medical professionals has been increasing recently with widespread globalization. Medical students must learn many subjects efficiently to meet global standards. We developed new English language learning materials to help students learn more comprehensively and effectively. The aim of this paper is to report a pilot study using these new materials to train students who will have an overseas educational experience.

Virtual reality (VR) makes it possible to experience events without concerns for time or space. VR creates a sense of immersion, which is important in language education. Another important feature of VR is repeatability. Students can repeat a learning experience with VR materials as many times as they like. These features of VR may be helpful for English language learning.

Humanoid communication robots have been reported to provide effective support in caring for autistic children, because the robot is between a human and a machine (Kojima et al. 2008). It is also reported that robots can be helpful for rehabilitation support for aphasia patients. Robots were therapeutic for patients with dementia and victims of the Great East Japan Earthquake. And a recent study was carried out to develop a method of using robots for patient education (Ishiguro et al. 2016). Communication between a person and a robot may be simpler than that between people, with less anxiety.

By combining the positive aspects of VR and a robot, we developed new medical English language learning materials to prepare students for an overseas educational program.

2. Materials and Methods

2.1. Materials

2.1.1. VR movie content

A VR movie was used to help students learn English language expressions in the context of a hospital tour prior to participating in an educational program in the Philippines. The VR movie was recorded by students who had participated in the previous year’s program (2017). The VR movie lasted about two minutes and explained about a pulmonary iso-
lation ward. The movie was edited to add English words or phrases to emphasize important points for learning. The VR movie was created and edited using:

- 360˚ video camera: Theta S (RICOH)
- Video Editing Software: Adobe Premiere (Adobe Systems, Seattle WA)
- The movie was projected on a 9.7-inch iPad (Apple, Cupertino CA USA)

2.1.2 Humanoid communication robot
A humanoid communications robot ("Pepper") produced by Softbank Robotics (Tokyo, Japan) was used in this trial. This robot can recognize and speak English and can show pictures and letters on a 10.1-inch touch-panel display attached to the chest of the robot. The robot makes gestures such as nodding and moving its arms, so it communicates in an almost human manner. A software development kit (Cholegraphe) was used to develop the English language learning materials. Participants watch the VR movie and learn some useful expressions, and then the robot asks five questions related to the VR movie. These questions regard features and English expressions used in the hospital in the Philippines. The robot asks questions orally and shows related pictures and expressions using a chest-mounted display. Students can answer orally or by touching the display, which shows four alternative responses.

2.1.3. Participants
Six medical students participated in this trial. All six applied to participate in Dokkyo Medical University’s overseas training program in the Philippines in 2018. They participated in this pilot study one week before the overseas training program started.

2.2. Methods
Each student participated in the trial in a separate room. The trial consisted of six steps, including a pre-trial questionnaire, VR learning, impressions after the VR session, robot learning, impressions after the robot session, and a post-trial questionnaire. We conducted another questionnaire via e-mail three weeks later when the students had completed the training program in the Philippines.

Step 1: In the pre-trial questionnaire, students were asked whether they had seen VR materials or talked with robots.

Step 2: The participants watched the VR material after sitting down in a chair and positioning the iPad display.

Step 3: After the VR presentation, students wrote free-form comments about what they had learned from the VR material.

Step 4: The students learned with the robot to check five English expressions presented as a game. First, the robot asked a question orally and showed related pictures and expressions on a chest-mounted display. The subject had the option of answering orally or by touching a display that displays four alternative answers. When the subject answered correctly, the next question was presented.

Step 5: After robot learning, the participants wrote free-form comments about the experience of learning with a robot.
3. Results

3.1. Training before going overseas

Comparing free-form comments written after VR and robot learning (Steps 3 and 5), five students felt that they acquired more information after robot learning than after VR learning. One student wrote that he could get details from VR such as patient information and the ward’s atmosphere.

The results of the post-trial questionnaire (Step 6) showed that five of the students felt that the combination of VR and a robot is more useful for understanding the contents than other English language learning materials such as VR only, robot only, movie via tablet, movie via smartphone, presentation slides by a teacher, and handouts. All students responded that learning with VR and a robot was very fun or fun. That positive mood can help students learn actively and may lead to improved performance.

The following comments were written in the post-trial questionnaire (Step 6):

1. “The Philippino English accent was strong, and I was surprised.”
2. “I was a little bit tense when I was watching the VR movie, because I felt like I was actually in the Philippines meeting people in the hospital there.”
3. “I could understand about the overseas training program through a visual image, so my concern was relieved.”
4. “I saw the atmosphere of the hospital and the people’s facial expression, thus the image of the overseas training program became clear.”

3.2. Questionnaire after going to the Philippines

After the initial training, we conducted a questionnaire via e-mail three weeks after the students finished the overseas training program in the Philippines. Five of the six students responded. All five recognized that the hospital in the Philippines was the same as the one in the VR during training. In written comments, one student felt that it was easy to understand the ward because he had seen it in the VR beforehand. Another student said he became more interested in the hospital in the VR than other places. Two of the five students wrote that the content (movie, language, atmosphere, etc.) in the VR was very useful, and the remaining three answered it was useful. One student wrote that the material delivered by the robot was very useful, and the remaining four felt that the content was useful to a certain extent. Written comments about what would be useful as preparatory material for overseas training included one by a student who wanted VR movies taken in additional places. Another student wanted to learn medical English words more with the robot because he actually used some words in the Philippines which he had learned with the robot in the training session. When asked about anxiety and expectations when visiting the hospital shown in the VR movie compared to other places visited in the Philippines, one student said he felt very little anxiety, three answered that their anxiety level was the same as the level they felt at other places, and one student did not answer. Two students felt that their expectations of visiting the hospital were greater to some extent, and three students answered that their expectations were the same as those they had for other places. Free-form comments included one by a student who felt déjà vu when he visited the hospital that was shown in the VR. Another student felt a strong impression when he visited the hospital watched in the VR, because in the VR he could not appreciate the scale of the whole hospital and the atmosphere. One student felt that the VR and the robot language learning material was very useful for gaining an overview of the program in the Philippines beforehand.

4. Discussion

This trial gave students a new English language learning experience with VR and a robot, providing an opportunity for language learning before they went overseas on a clinical education program. By studying with these English language learning materials, the students learned not only English expressions but also different accents, and details of the hospital where they were to participate in further training.

VR materials provide a simulated experience, including the facial expressions of the people they were likely to meet, and the hospital’s atmosphere. After learning with these VR materials, students acquire more than just English language, which may relieve their anxiety and increase their expectations to some extent when they actually go abroad.

Students can learn English using VR by moving the iPad to where they are interested, and the robot can provide questions as a game to make sure that the main points are reinforced. By combining VR and a robot, students learn comprehensively and acquire English expressions in the context of a hospital setting. This single-arm trial was conducted with a small group, and further studies are needed with larger groups to confirm the validity of these findings.

5. Conclusion

This pilot study shows that new medical English language learning materials using VR and a robot help students to
learn medical English more comprehensively, and also reduce their anxiety about going abroad.

**Acknowledgements**

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**References**


1. Introduction

This article is based on work to produce a set of core undergraduate materials with an accompanying general medical English word list. It has involved two successive central government grants (kakenhi), and is in its sixth and final year. By April 2019, a textbook draft and accompanying word list should be complete.

The initial grant-supported project started with a team of three applied linguists (Simon Fraser, Walter Davies, Keiso Tatsukawa) from Hiroshima University’s Institute for Foreign Language Research and Education. A second grant was awarded to develop online materials. The project included a fourth applied linguist (Kazumichi Enokida) with expertise in ICT. Due to the challenge of developing accurate medical English materials, the team has expanded to incorporate two medical specialists: Michihiro Hide (Dean of Hiroshima University’s medical faculty), and Takashi Sadatomo (Head of Neurosurgery, Higashi-Hiroshima Medical Center).

Both projects have diverged from initial planning. In the first project, the team envisaged a word list emerging from vocabulary research on medical articles. The list would then be used to construct pedagogic materials. However, this strategy was rapidly adapted to a parallel approach, with corpus analysis of reference books (Gray’s Anatomy for Students, Harrison’s Principles of Internal Medicine) combining with materials development based on body systems (Table 1), and covering aspects of gross anatomy, physiology, and medical problems/diseases. The switch in focus from articles to reference books reflected the fact that in the early stages of undergraduate study these were more relevant to students and provided the basics in medicine. A parallel approach was taken for two reasons: A linear process would take a very long time, and it was necessary to produce materials for an annual medical English intensive course taught by members of the institute; also, an alternative route to word list construction was through the creation of EMP materials that focused on key topics found in medical textbooks, and the extraction of words from diagrams, essays, and dialogues in those EMP materials. There was consequently a reciprocal relationship between corpus analysis and materials design, leading to word list development.

The second project was on the development of online materials. Initially, it was planned as an online resource primarily for second-year students, with a focus on gross anatomy and histology. However, the project team found that a more practical approach was to place existing units of material from the first project online, using them for a flipped learning course. Thus, the two projects are inextricably intertwined, with the aim of producing a set of pedagogic materials covering the major body systems and associated medical fields, and containing a set of key words that form a core general medical English word list. However, a problem with this approach is that the word list becomes dependent on the topics in the materials, which so far have been constructed for a specific course. To move to a general medical English

Table 1. Units of pedagogic materials

| 1. Anatomical planes and views |
| 2. Musculoskeletal system |
| 3. Central nervous system (CNS) |
| 4. Cardiovascular system |
| 5. Pulmonary system |
| 6. Lymphatic system |
| 7. Integumentary system |
| 8. Digestive system |
| 9. Endocrine system |
| 10. Liver and portal system |
| 11. Urinary system |
| 12. Reproductive system |
| 13. Eyes |
| 14. Ear, nose, throat |
word list embedded in a set of core materials requires a review of existing materials and both an editing and extension of them. This article illustrates the process in a unit on the central nervous system, and considers how the key words can then be categorized.

2. Reviewing existing materials

The central nervous system (CNS) unit was designed in three interlocking stages. The first stage introduced anatomy through matching medical terms to numbered diagrams, followed by a short essay on the relevant anatomy/physiology, then by comprehension questions and a speaking task in which the students were to explain anatomy/physiology to each other. The second section was oriented towards medical problems associated with the relevant anatomy. In the CNS unit, these problems were subarachnoid hemorrhages, chronic subdural hematomas, cerebral infarctions, and brain tumors. An initial vocabulary section required the matching of vocabulary with definitions. This was followed by an essay involving some background history, explanation of the problems, and description of the signs and symptoms for each problem. The last section involved a doctor-patient dialogue with comprehension questions, which led up to role plays involving the signs and symptoms from the medical essay.

In reviewing the CNS unit, the most pertinent problem was that there was no section on treatments. The unit, which was designed to balance receptive skills with productive skills, was already long, and a key issue was how to create units of manageable length. There was also the question of whether the unit had a vocabulary that was too narrowly focused. Both of these issues needed to be resolved.

3. Discussions with a neurosurgeon

To explore how the materials might change, two members of the textbook writing team, the materials designer (Davies) and the neurosurgeon (Sadatomo) had three meetings. Within the team the role of the medical doctors has been to give advice and guidance on the medical content, while the applied linguists have designed and organized the materials. For applied linguists, it is difficult to gain sufficient insight into the medical field, while for the medical doctors the challenge is to understand what the applied linguists need to know. As vocabulary was a key part of the project, a practical starting point was to discuss words and think about categorizations.

Initially a word list was created by taking terms from several sources: Unit 9 (nervous system) of Structure and Function of the Human Body (a textbook used by undergraduates), Gray’s Anatomy for Students, articles from WebMD, and a catalogue, Basic Sets of Neurosurgical Instruments, as well as the key words from the existing CNS unit of pedagogic materials. These terms were categorized into several sections: anatomy/histology; specialisms/specialists; medical problems; symptoms; tests; treatments. This list was sent to the neurosurgeon, and the contents were discussed at a first meeting.

The most important discussion points were that the term physiology had been missed from the categories, and that a number of words should be added (Table 2). While the omission of physiology, with its functions and processes was an oversight in labelling, it did highlight the issue of verbs. The neurosurgery word list had almost no verbs in it. To remedy this, Unit 9 of Structure and Function of the Human Body was scanned again for verbs or noun forms that converted easily to verbs (e.g. regulate from regulation). Internet searches were also used for verbs associated with surgery. A new list was created using the following categories: gross anatomy/histology/physiology (GAHP)—102 items; specialisms/specialists—15 items; medical problems—62 items; symptoms—56 items; tests—15 items; treatments—88 items; surgical verbs—30 items; GAHP verbs—81 items. The advantage of this process was that it gave a common point of reference for the two participants in the discussion.

In creating the new list of words and focusing on their categorization, it became increasingly apparent that on the applied linguistics side, there was a lack of understanding of how the medical field relating to the central nervous system was organized. Consequently, the neurosurgeon was asked the following questions by email:

1) How would you explain the key medical problems and surgical procedures of neurosurgery? (For example, should medical problems be categorized in the following way: aneurysms, tumors, malformations, head traumas?

Table 2. Additional vocabulary suggested by a neurosurgeon

| anterolateral artery, middle cerebral artery, | posterior cerebral artery, internal carotid artery, |
| external carotid artery, anterior communicating artery, | posterior communicating artery, Galen’s vein, |
| internal carotid vein, carotid vein, blood pressure, artery, vein, | speech therapist, occupational therapist, |
| physical therapist, ward nurse, neuro-radiologist, | sacral aneurysm, dissecting aneurysm, dissection (a tear), |
| anaplastic astrocytoma, anaplasty, facial spasm, | DSA (digital subtraction angiography), |
| angiography, angiogram, neurological examination, | blood test, ECG (electrocardiogram), |
ma?)

2) How should these key categories be subdivided? (Taking tumors as an example, would the subdivisions be meningioma, blastoma, etc.?)

In a second meeting, the neurosurgeon provided a set of diagrams by listing out categories relating both to neurosurgery and neurology: cerebrovascular disease, brain tumors, anomalies, functional disease, infectious disease, degenerative disease, injury (trauma). By doing this, a hierarchy of terms was created. For example, meningioma was categorized under benign tumors, which in turn were categorized under brain tumors.

Given that one of the gaps in the CNS unit involved treatments, in the third meeting the neurosurgeon was asked to describe operations; he provided diagrams and described the clipping of an aneurysm in the lateral sulcus. This was followed by a question and answer session, in which he explained when clipping was preferred to coiling.

4. Editing and extending the CNS unit

In terms of creating a unit with a wider range of words, there were two ways in which this could be done: editing existing sections, and writing new sections. In relation to the topics discussed in the interviews, the primary focus was on neurosurgery and neurology, so that the main focus of editing became the essay on neurosurgery. The existing essay opened with a paragraph oriented towards history, with a focus on the twentieth century neurosurgeon Harvey Cushing. This was replaced by a much shorter paragraph based on the diagrams from the second interview:

The central nervous system can be affected in a variety of ways. Infectious diseases (e.g. meningitis and encephalitis) and degenerative diseases (e.g. multiple sclerosis, Parkinson’s disease, dementia) are usually treated by neurologists. In contrast, neurosurgeons often treat cerebrovascular disease, tumors, and functional diseases (e.g. trigeminal neuralgia and facial spasm).

By doing this, 11 very useful terms (underlined) could be introduced, and with some careful re-writing, two important terms lost from the original passage, hemostasis and aseptic, were kept within the text. A new section was created on treatments, involving listening. This added a further 38 terms. With the addition of the new terms, the number of word list terms increased from approximately 70 to 120. A further 30 words in the unit were considered more general words that were useful but unlikely to form part of the word list.

5. Categorizing the words in the CNS unit

In consideration of the neurosurgery/neurology component of the word list emerging from the CNS unit, it is important to consider the types of term in the list and the challenges presented by the words. The terms can be divided into three categories: lay-technical terms, cryptotechnical terms, and fully technical terms.

Lay technical terms are those that are generally known in everyday English, examples being headache, blood, bone, and surgery. In English for Medical purposes (EMP), they can be categorized on the basis of EFL students’ knowledge of them in general English studies. Often lay-technical words form part of multi-word terms which have a more technical meaning, such as blood brain barrier.

Cryptotechnical terms are those which appear to be general words but actually have a specialized meaning, examples being progressive, supply, superior, and cavity. The category is important because such terms have the potential to confuse both teachers and students.

Fully technical words are often of Graeco-Latin origin, examples being pericranium, meningioma, and pia mater. From a teaching perspective, this category presents the most challenges. Spelling and pronunciation are often difficult, and there is also the influence of the students’ first language. With Japanese, words imported into the language create a pronunciation that is greatly changed. An example of this is trauma, which when spoken in Japanese has a very different pronunciation. Morphology is another issue, given the prefixes, suffixes and roots that are used for medical terms. Examples of word parts appearing in the vocabulary are a-, anti-cerebr(o)-, hemo-, hyper-, and hypo- (Table 3).

6. Issues emerging in the final stages of the project

From a lexical viewpoint, the pedagogic problems are complex. However, the structure of the project, with its fusion of materials development and vocabulary analysis, provides some solutions to these. With a word list embedded within a set of materials, students encounter the terms in context.

### Table 3. Frequently occurring word parts occurring in the CNS unit

Table 3. Frequently occurring word parts occurring in the CNS unit

<table>
<thead>
<tr>
<th>Word Parts</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>a-, angio-, anti-</td>
<td>cerebr(o)-, -cyte, cyt(o)-, dys-, endo-, hemo-, hyper-, inter-, intra-, it is, neuro-, -oma, -osis, pre-, post-, sub-</td>
</tr>
</tbody>
</table>
Also, the materials are primarily aimed at students with at least a basic understanding of anatomy and physiology in their own language, so that they can use their schematic knowledge of body systems to aid their understanding of the key terms. As they learn terms, they can be sensitized to some of the more overt features. For example, in the CNS unit, they can be made aware of hemo- (hemorrhage, hemorrhagic stroke, hemostasis).

A key issue concerns the level of support that a teacher needs in order to guide the students to important features of medical English. If course instructors are language specialists, their problem is their own lack of content knowledge in a complex specialism. To address this, a teacher’s guide needs to accompany the materials, giving detailed guidance on how to teach the unit.

A second issue relates to units of meaning, which may be word parts, whole words, or multiword units. In terms of a word list, important word parts should be listed, and where possible highlighted for teaching in a teacher’s guide. Many of these word parts will be seen across units. For example, the word part -oma occurs in many terms in the CNS unit (e.g. meningioma, glioma, medulloblastoma), but is also found in Unit 8 (adenocarcinoma) and Unit 10 (hepatocellular carcinoma). Similarly, in relation to whole words, some of these have high value due to their range across the units. Examples are cavity, incision, and suture.

A third issue is the way the word list should be organised. There are concerns relating both to reference and to learning. The list is a pedagogical one, oriented towards high value words for learning. From this point of view, the terms can be listed on the basis of the units of material, with between 150 and 200 terms per unit. These can be learned partly through classroom use of the materials and reinforced through a study of the relevant unit list. However, as a stand-alone document, a long list presented in alphabetical order is preferable. In both cases, there is the question of how to deal with word families and their noun forms, verb forms, adjectival and adverbial forms. In most cases these should be listed out under one item (e.g. cranium n, cranial adj.).

There is also the question of how to further focus on vocabulary. The projects undertaken by the research team are underpinned by the integration of discourse and vocabulary, enabling students to get used to seeing key words in context. However, students read to become adept in combining units of meaning, comfortable with switching between forms in word families, aware of important collocations, and also deal with the challenges presented by spellings and pronunciation. A further step is to build supplementary materials that focus on these vocabulary issues. This could be done through a self-study workbook that is also integrated with the university’s learning management system.

References
1. Introduction

In this article, we provide a summary of a flipped learning course on English for Medical Purposes (EMP), examine test results, evaluate the student feedback from the course, and also give a perspective from two of the course instructors. The use of Information and Communication Technology (ICT) to create the course has been described in a previous article\(^1\), so that only a brief summary is given here. The course is strongly linked to central government funded research. It was taught by members of Hiroshima University’s Institute for Foreign Language Research and Education for the university’s medical faculty.

Flipped learning\(^2\) typically involves out-of-class learning utilizing ICT and the Internet, where learners are asked to access the online materials for instruction before the class, using their own personal devices such as PCs, smartphones, or tablets. These materials, including video clips, texts, images, interactive quizzes, and essay questions, enable learners to work on them repeatedly, regardless of time and place, until they can understand their content. In flipped learning, a classroom is a place where learners should use the knowledge that has been acquired beforehand, through group activities that allow them to use their productive and creative skills. Flipping the classroom, typically with the aid of technology, allows learners and instructors to use their limited class time more efficiently\(^3\).

2. Background

The spur that led to the flipped learning course was an enquiry from the medical faculty about reducing the cost of an existing course, which involved a transfer of budget from the medical faculty to the institute, and was being taught annually as a four-day intensive course. This required four instructors to teach 12 classes over four days, with a vocabulary test and evaluated writing task included in this time. Having seen a presentation on a successful flipped learning course at the JASMEE conference\(^4\), and having obtained research funding for using ICT in medical English education, the institute’s research team proposed a switch to flipped learning, compressing the taught classroom component into two days, with evaluation tasks (the vocabulary test and the evaluated writing task) being placed on a final day.

To switch to flipped learning, it was necessary to place a considerable amount of existing course material online (Table 1). This material had been created to balance receptive skills with productive skills. For the flipped learning course, vocabulary development exercises, readings, and listenings were placed online via the university’s learning management system (LMS): Blackboard Learn 9 (Bb9). Productive skills tasks, such as conversations, role plays, and summary writing, linked to the receptive skills tasks, were kept for the two days of classroom teaching.

Once the online materials were ready and had been checked by a member of the medical faculty, third-year students were given an orientation (July, 2017). Here, they were informed of what they needed to do prior to the taught component of the course, what would happen during the taught component, and how they would be evaluated.

All the students completed the online component to the required level by the deadline, four days prior to the taught component, which took place in September, 2017. At the end of the taught component, students were asked to complete a questionnaire. For the 2017 course, an online questionnaire was used for the first time to obtain feedback from the stu-
The most objective results from the course came from a 50-item section of a multiple-choice vocabulary test. These items were substantially the same in the 2016 (traditional) course and 2017 (flipped-learning) course (Table 3). An unpaired two-sample t-test showed no significant difference between the results in 2016 and 2017, indicating that students were quite capable of learning the words by themselves through the online tasks.

In 2017, the results of the summary writing task were judged to be better than in 2016 (Table 4). These were marked by the same instructor (Fraser) on the same basis over the two years. For simplicity, borderline grades have been categorized under a single grade (e.g. A/B has been categorized as an A, B/A has been categorized as a B).

One reason for the improvement may be that diligent students had much more time to prepare. This was because the essay for the summary writing task on diabetes mellitus was in the online materials. Also, the scheduling of the writing task on a separate evaluation day appears to have had an impact; Seven students were given failing grades in 2016 (six Z-grades were given for non-attendance, and one D-grade was given for a very poor summary). In 2016, the task was given during classroom teaching time, and some students may have given it less priority than in 2017, where it was clear to all students that it was an important part of their evaluation. In addition, they had been required to answer questions on the diabetes mellitus essay in the online materials, so that all students had some familiarity with it, even if they did not specifically prepare for the task.

In this article, we tabulate the results of the evaluation tasks completed by the students (the vocabulary test and summary writing test) and compare them with the traditionally taught course in 2016. We then analyze the feedback from the students. Finally, we discuss the course. As two of the authors were also instructors on the course in 2016 and 2017, this includes their reflection on the changes.

### Table 3. Vocabulary test results in 2016 and 2017

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>117</td>
<td>122</td>
</tr>
<tr>
<td>Mean</td>
<td>38.88</td>
<td>39.34</td>
</tr>
<tr>
<td>SD</td>
<td>7.32</td>
<td>6.59</td>
</tr>
<tr>
<td>Taught hrs</td>
<td>18 hrs</td>
<td>11.5 hrs</td>
</tr>
</tbody>
</table>

### Table 4. Results of the summary writing task

<table>
<thead>
<tr>
<th>Grade</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>A</td>
<td>75</td>
<td>83</td>
</tr>
<tr>
<td>B</td>
<td>25</td>
<td>24</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>D</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Z</td>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>
4. Student feedback

4.1. Student motivation

Of the respondents, 94 percent were positively motivated, including 32.7 percent who were very motivated, to develop their English skills (Figure 1). This was reassuring because the possibility that students might not be motivated to study medical English was a concern for the teaching team.

4.2. The online component

Just over 60 percent of the students studied the materials for between six to ten hours. As a rough calculation, if these students studied for eight hours (480 minutes), then total study time including tests was 1,180 minutes, which is comparable to the 2016 traditional course. It is also important to note that 23.2 percent of students spent 0 to 5 hours, 12.1 percent took 11 to 15 hours, and 5.1 percent took more than 15 hours (Figure 2). Considering this variation, the advantage of the online component is that students can work at their own speed. In a classroom, the work tends to be tailored towards the median student, which can be frustrating both for fast students, who must wait, and for slower students who do not have sufficient time to process the English they are studying.

Regarding the clarity of the online part of the course (Figure 3), 90.9 percent of respondents gave positive feedback, with 34.3 percent finding the materials very clear. This positivity was reflected in the comments from the open-ended items, such as the following:

- My medical vocabulary improved dramatically by using it.
- The essays on the online [course] are important and they will be useful in the future.
- Online part was a good review of anatomy I learned last year.
- I felt it made me easier to learn English by myself before starting the English lectures.

A small proportion of students, 9.1 percent, felt that the materials were not so clear. Possible reasons for this were revealed in the open-ended comment section. There are two types of problem: technical issues, and the difficulties with language. On the technical side, a few students pointed out that the online materials needed to be studied on a big screen:

- These online contents are not suitable for use with a laptop or a tablet. A big monitor is necessary to clear the problem.

- It was very good and a little bit difficult. It may become better if we can see all of the texts with our cellphone.

A senior member of the medical faculty, who checked the online materials for any content problems, had also mentioned that some of the diagrams were too small. However, under pressure to have the materials ready for students, it had not been possible for us to make changes for 2017.

For some students the content was problematic. This could range from frustration that the content was too challenging (The online course is so difficult and it wastes a lot of time), frustration at the amount of material (They are useful, but the amount of online part is big), or that some of the content was too difficult (There were some too difficult parts). As noted above, five percent of students took more than 15 hours to complete the materials, and it may be these students who found the materials difficult and frustrating. The weakness of online materials is that students are likely to study them in isolation. For a small percentage of students, it may be preferable to study the online component in class, where they can get help from a teacher or other students when they are struggling.

4.3. The taught component

The taught component took place over two days (Wednesday and Thursday) with a strong focus on productive skills, the expectation being that students had covered the necessary input materials in the online component. 63.3 percent of students found the teaching quite clear (Figure 4) in contrast to 57.1 percent of students for the online component. This may be explained by the experience of the teaching team and the advantages and disadvantages of classroom teaching. As noted above, in the classroom, students could seek clarification both from the teacher and other students, possibly reducing the number of students who felt the taught component was not so clear. However, some of the able students may have preferred their autonomy in the online component and the certainties of multiple-choice answers.

Figure 5 depicts the perceived usefulness of both parts of the course. In relation to the taught part of the course, 95 percent of the respondents gave positive responses, and 37.4 percent found it very useful. The feedback on the online component showed similar results, with 91.9 percent responding positively and 39.4 percent finding it very useful.

5. Instructor perception and discussion

From an instructor perspective, four key considerations emerge from the flipped learning course: planning, staging,
and control; the importance of medical faculty support; efficiency; changes of teaching rhythm and pace in the flipped learning classroom.

### 5.1. Planning, staging, and control

Changing to a flipped learning course involved considerable planning to implement the changes. The (traditional) 2016 course had been straightforward, with course materials being printed just prior to its start. However, in 2017, there were two distinct components to the course: the online component, and the taught component. The inclusion of a self-study component meant that materials had to be re-written and organized on the LMS. Students had to be made aware of the self-study requirements and how these related to the course overall. Consequently, the online component had to start with an orientation. During this, students received a handout in which the course was clearly outlined and the student evaluation clearly specified. Students were expected to work on the online materials until a mark of 80 percent was achieved.

The creation of an online component also brought a larger part of the course under central control. With the traditional course, vocabulary learning was delegated to the instructors. However, with an online component, all students were required to follow carefully pre-set tasks, and their performance could be monitored via the LMS.
5.2. The importance of medical faculty support

The change required coordination between the Institute for Foreign Language Research and Education and the medical faculty. A crucial factor was the very strong support provided by senior medical school faculty members and administrators. Senior faculty members checked drafts of teaching material for accuracy, and made suggestions on the content of the online materials. In addition, they ensured that a senior member attended the course orientations, mainly to stress the importance of medical English and encourage the students to make the most of the course. An administrative staff member in the medical faculty worked closely with the institute on the new scheduling, keeping students informed and providing key data for registering students on the LMS for access to the online materials.

5.3. Improved efficiency

A major advantage of the flipped learning course was that it created space for a day that was primarily oriented towards evaluation. From the instructors’ point of view, previous problems due to time pressure were greatly reduced. There was time to give students a short orientation on filling out mark cards for the word test, and students could also be given a full 90-minute period to work on their summary writing task, enabling them to produce more polished summaries than in previous years. Regarding the word test, despite the substantial reduction in the number of classroom contact hours, the mean student score was almost identical to that of the previous year.

5.4. Changes of teaching rhythm and pace in the flipped learning classroom

With the flipped learning course, there was a radical reduction in classroom contact hours. This change was made possible partly due to the experience of the teaching team members. However, the pace and flow of the flipped learning classes were notably altered. Although, from the perspective of time, the new course is efficient, there is the question of whether students benefit from quieter periods in the classroom when they have time to reflect and interact with their instructor in a more relaxed way.

6. Conclusion

The flipped learning course described in this article was designed as an innovation to improve efficiency, both in terms of teaching and learning, with the momentum developing from a mixture of research and pedagogic interests.

On the positive side, this research has shown that flipped learning using an LMS can be as effective as a more traditional taught course. Even with the constraints of university budgets, personnel, and curricula, the quantity and quality of course content can be maintained, while classroom time can be reduced. Furthermore, online learning can be repeated to reinforce language, and it also allows students to work at their own pace.

A more difficult issue is the change in the classroom component, particularly as the course is intensive: The flipped learning intensive medical English course resulted in high energy classes. While this might be considered a positive change, it was certainly more tiring for the teaching team, and it is open to question whether high energy classes can be sustained intensively by teachers and students for more than a few days. Future research will be undertaken to investigate the flipped learning course with classroom teaching scheduled across eight-week terms rather than being taught intensively.

References
Dental consultations for foreign patients using a visual description tool

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At our dental university hospital, which is located in the center of Tokyo, the number of patients who do not understand Japanese has been increasing. In the next few years, the hospital is expected to see an influx of non-Japanese-speaking individuals because of the 2020 Tokyo Olympics and Paralympics. In preparation for this, we developed a multilingual visual description tool for use on a tablet computer to help overcome language barriers between staff and non-Japanese-speaking patients. This project was executed thanks to a Chiyoda-gaku grant and with the assistance of various dental staff. Although the project is ongoing, some data on its progress are available. First, medical and dental patient information questionnaires written in English and Chinese have been improved and are now presented using a check-box system with Japanese subtitles designed to be understandable to Japanese dental staff. Second, consent forms have been revised. Third, we have begun creating illustrations of various dental situations and writing appropriate descriptions for each scene in two languages. Our final goal moving forward is to translate this multilingual visual description support tool into a tablet application for use in clinical dental situations.

Keywords: dental treatment, foreign patients, foreign languages, multilingual visual support, description tool, tablet

1. Introduction

Currently, there are few communication tools, such as books and illustrations, that assist Japanese medical and dental staff in conversing with patients in English. This is problematic, given that the number of patients who do not understand Japanese has been increasing in our hospital. Therefore, the hospital has begun mandating that non-Japanese-speaking patients be accompanied by a formal or informal interpreter when they visit the hospital. Unfortunately, many people do not follow this rule.

Many patients come to our hospital requiring urgent dental treatment, or are seeking treatment for the first time without an appointment. When such patients bring cultural or language barriers with them, it can lead to problems in the consultation process. While there are various tools for communicating with patients — and, in some instances, these existing tools are quite useful — there is substantial room for improvement. These communication tools can help in delivering diagnoses, treatment options, and treatment steps, as well as provide patients with instructions on treatment compliance; however, many do little to help with answering patients’ questions. There appear to exceedingly few, if any, tools available to fully answer patients’ dental questions in a clear and thorough manner.

Picture cards are known to be useful visual supports for special needs dentistry, especially for people with developmental disorders like autism spectrum disorder. It is plausible that picture cards might be also beneficial for a multicultural context.

Dental staff are often afraid of the difficulties that can arise due to a lack of communication. We therefore sought to create a visual description tool that can help reduce stress in dentistry and improve patient care via better communication.

The aim of our study is to develop a multilingual support visual description tool for patients from foreign countries who do not understand Japanese. We hope that the tool will help improve non-Japanese-speaking individuals’ understanding of dental treatments in preparation for the expected surge in this population surrounding the 2020 Tokyo Olympics and Paralympics. In using the tool, patients may feel
more comfortable with dental care, while we, as providers, will be assured that we are communicating with them appropriately. We offer here a progress report on the implementation of this tool.

2. Methods

1. This study was performed with the support of a Chiyoda-gaku grant awarded by the Chiyoda Ward, Tokyo in 2017. The requirement of the Chiyoda-gaku grant was to create a multilingual support visual description tool supporting three languages: English, Chinese (simplified and traditional), and Korean. However, due to grant limitations, the tool currently supports only English and Chinese.

2. Questionnaires for collecting patients' medical and dental information were improved with the use of a check-box system that allows patients to report important details before face-to-face meetings with staff.

3. Consent forms were developed and provided before each dental consultation to avoid legal problems arising between patients and dental staff because of differences in language, culture, or understanding of dentistry.

4. Various dental situations and scenarios were selected. Descriptions for these illustrations were translated into English and Chinese. Our future plan is to develop a visual support tablet application containing these descriptions and illustrations.

3. Results

The progress we have made thus far is detailed as follows.

1. We improved the format of patient information questionnaires, which were written in English with Japanese subtitles, by using the check-box system. These documents were subsequently proofread and translated into Chinese as well. In the chief complaint section of the questionnaire, we included questions on the upper lip or tongue frenulum, supernumerary teeth, and congenitally missing teeth or early loss of teeth, since these are important questions in pediatric dentistry. These documents are now ready to be adapted into an electronic format for use on a tablet (iPad) (Figure 1).

2. Two types of consent forms were developed in English. The first detailed the process of undergoing dental treat-
ment without a medical interpreter, while the second documented how dental staff may need to hold pediatric patients during treatment when they begin to struggle. These documents were proofread and translated into Chinese.

3. We selected approximately 500 dental situations and wrote about them in detail in Japanese. These explanations were subsequently translated into English, after which they were thoroughly proofread. The Japanese descriptions were also translated into Chinese.

4. Discussion

In this section, we explain the reasons for taking the above-mentioned actions.

4.1. Changing patient questionnaires

When non-Japanese-speaking individuals visit the hospital for dental treatment, we, as providers, often feel overwhelmed and ill-prepared to face their questions. By having patients complete questionnaires in advance, we can review critical information before meeting them in the consultation room. The questionnaires were designed to help us in the diagnostic process, since obtaining such information can be difficult during face-to-face consultations as a result of the language barrier. To circumvent this language barrier and eliminate any effort needed to interpret handwriting, we used a check-box system. Furthermore, each question is accompanied by a Japanese subtitle to help staff understand the responses.

4.2. Consent forms

Clear agreement between parents and providers is necessary, particularly in pediatric dentistry. Children often need to be restrained during dental procedures, which makes it important to inform parents of this necessity in advance; otherwise, there is a high likelihood of them perceiving this behavior as unjust or abusive. Parents must be informed of the possibilities in advance to ensure that they make an informed decision regarding whether or not to pursue treatment. We also created a consent form for use in urgent situations where an interpreter is not available (Figure 2). This form essentially says, "We are not responsible for any misunderstandings caused by the different languages and cultures but will surely do our best to provide good dental treatment." Together, these consent forms ensure that any misunderstanding will be avoided. They help inform patients of possible treatment options and prognoses, as well as of common dental practices that may seem unusual in different cultures (e.g., holding children’s hands down during a procedure). Thus, it is imperative to collect signed consent forms from patients before treatment begins.

4.3. Selection of various dental situations and creating descriptions

We chose the dental situations based on our clinical experience. First, we wrote down as many treatment options and chief complaints as we could. Second, we considered the probable questions and answers in dentistry. Third, we consolidated and narrowed down the options. For instance, in the case of composite resin restoration (i.e., cavity treatment), numerous treatment options are available. Informing patients about this treatment requires many steps: We need to describe X-ray findings, consider individual differences, and discuss the possibility of transitioning to an endodontic treatment depending on the depth of the cavity and its proximity to a nerve. These explanations, as well as subsequent post-operative care, must be individualized. This of course presents some challenges. Illustrations and pictures might help patients understand what these descriptions indicate (Figure 3). Currently, the development of the illustrations is
in progress. In dental practice, we often draw simple pictures for patients with the materials available to us; however, well-designed visual aids would be even more helpful.

5. Conclusions

This is our first progress report on the development of this visual description tool. We plan to publish a second report when the final tool is ready for use in clinical situations. To complete development of the tool, we plan to do the following.

1. Patients’ medical and dental information questionnaires will be adapted for use on a tablet in clinical situations.

2. We will develop illustrations for all the above descriptions of dental situations.

3. We will continue to improve these descriptions and illustrations on the tablet.

The Chiyoda-gaku grant was issued in 2017, and efforts continue to ensure that patients from foreign countries are provided with safe and comfortable dental treatment at our hospital in Tokyo during the 2020 Tokyo Olympics and Paralympics.

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Conflict of interest

The authors no conflict of interest.

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References


The illustrations can serve as clues for what the sentence means.
After the success of the first *PechaKucha*-style presentations at JASMEE 2012, JASMEE 2018 hosted a second *PechaKucha* session to share English for Medical Purposes (EMP) lesson plans on July 29.

For those of you who are new to *PechaKucha*-style presentations, it is a global presentation phenomenon which was started in Tokyo in 2003 by Dytham and Klein, two architects who trademarked the *PechaKucha* format. Presentations are 6 minutes and 40 seconds long. According to the creators, “*PechaKucha* 20x20 is a simple presentation format where you show 20 images, each for 20 seconds.” Speakers must present while the images advance automatically on a timer. The objective of these simple but tight constraints is to keep the presentations brief and focused to give more people a chance to present in a short period of time.

In this workshop, we invited 12 JASMEE members to give presentations lasting 3 minutes and 20 seconds about their own EMP lesson plans. These presentations consisted of 10 slides (not the typical 20 slides) shown for 20 seconds each. After all presentations were finished, we had a 30-minute floor discussion.

This report provides brief summaries of the 12 presentations.

**Presentation 1 by Cosmin Mihail Florescu (International University of Health and Welfare): Student-owned learning, managed by instructor**

*Problem to be solved:* Japanese students are routinely described as experiencing more anxiety about speaking in English and exhibiting lower levels of confidence in their listening skills when compared with their peers in other countries.

*Brief description of the lesson plan:* My lessons begin with a question which motivates students to both justify their answers and to be curious about their classmates’ answers. We continue with a vocabulary-building activity, during which students divide a list of 30-40 words at each table; each student has to study his/her set of words and endeavor to explain it to the other group members to ensure that all the vocabulary is understood when heard. After watching the TED talk, students are asked to rate their comprehension to measure their confidence. Short quizzes testing their actual comprehension are also administered to enable students to map their comprehension onto their self-assessed confidence levels.

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**Keywords:** English for medical purposes, lesson plan

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This report is based on a workshop delivered at the 21st JASMEE Academic Meeting held at the Nippon Dental University School of Life Dentistry at Tokyo on July 29, 2018.
Take home message:
By infusing the lessons with the concept of student-owned learning, a language instructor can ensure that sufficient speaking opportunities exist to maintain student motivation at an optimum level while they study new vocabulary items and practice listening skills.

Presentation 2 by Jun Iwata (Shimane University):
Kahoot: A powerful tool to make your lessons more fun

Problem to be solved:
Information technology has been changing many aspects of our lives, including education. The problem for today's teachers is how to harness technological advances to enhance learning and stimulate motivation. Kahoot, a free web-based game learning platform, is part of the solution. It is easy, interesting, effective and motivating.

Brief description of the lesson plan:
Kahoot is a very teacher-friendly, free, web-based tool that allows teachers to easily create quizzes and interesting activities to supplement their lessons. I use Kahoot for 2nd-year nursing students to give them a fun way to review the medical English terms they have learned. I leave 5 minutes at the end of the lesson for students to enjoy answering multiple-choice questions on their mobile devices or computers. A survey of my students’ perceptions about the use of Kahoot shows that 60.3% of them find Kahoot helpful, fun and motivating.

Take home message:
Kahoot is an easy yet powerful tool to make your lessons much more enjoyable.

Presentation 3 by Tamerlan Babayev (International University of Health and Welfare):
IUHW teaching clinical medicine in English: hematuria case study

Problem to be solved:
Learning clinical medicine can be a challenge, but add to this the complexity of doing it in a second language and the difficulty is multiplied. It is imperative that we make our materials as straightforward as possible to support student learning. This lesson plan aims to provide students with a logical framework for approaching hematuria, where each new element is presented as an iterative addition to an underlying structure.

Brief description of the lesson plan:
I developed the mnemonic “Glomerular or MISTER” (Malignancy, Infection, Stone, Trauma, Extras, Renal) and demonstrated how this mnemonic represented a practical diagnostic framework. After teaching the semantic qualifiers applicable to each category or specific diagnosis (e.g. stones and the qualifier of sudden onset flank pain radiating to the groin), I present this information to students visually overlaid on top of the diagnostic framework. When students are then challenged with clinical cases, they can follow the information from the case back through the framework and make the associations needed to make a diagnosis.

Take home message:
Give students a framework for their knowledge to make it easy to remember and show how future learning fits into it.

Presentation 4 by Alan Hauk (Toho University):
Introduction to Medical English

Problem to be solved:
The Latin and Greek roots, prefixes, and suffixes that make up the components of medical terminology are very useful for beginning medical students to learn, but they can be boring to study. We developed a lesson style for our 1st-year medical vocabulary class that made learning these word elements fun and effective.

Brief description of the lesson plan:
The class uses the textbook Medical Terminology: A Short Course by Davi-Ellen Chabner as its source. The target vocabulary list is kept fairly modest, because we want the students to learn the terms thoroughly. Each class is taught in two parts. In the first hour, all the 1st-year students are together in one hall for a PowerPoint lecture, which is periodically...
broken up with individual worksheet activities. In the second hour, the students disperse into six different classrooms to practice what they studied in the first hour using flash cards and games. Students can receive more personal attention from the teachers in this second hour, because they are in small groups.

**Take-home message:**
Learning vocabulary does not have to be boring. By alternating between lecture and student-based group activities, the students can be kept engaged, and the good results of our final exam showed the success of this approach.

**Problem to be solved:**
Educators may struggle with selecting topics that they are knowledgeable and passionate about and are related to the medical content that students desire. This can be especially pertinent for educators with limited medical backgrounds.

**Brief description of the lesson plan:**
I find that TED Talks are a great way to connect my passions with issues in medicine. Using subtitles when watching TED Talks is important, as Paivio’s dual-coding theory stresses that the extra channel of input increases retention. As my lessons center on small-group discussion, the students must develop a deeper understanding of the TED Talk beyond the language of the speaker. To achieve this, I encourage students to watch the video and/or read the script before class, and I often assign comprehension activities using the video through EdPuzzle.

**Presentation 6 by Yusuke Hayasaka (International University of Health and Welfare): Teaching heuristics: An example of incorporating reading and a stimulating activity**

**Problem to be solved:**
English teachers who focus on reading (especially academic reading) may struggle with presenting activities in an “active” style. They may also have difficulties relating the target knowledge acquired through reading to students’ daily experiences.

**Brief description of the lesson plan:**
This lesson plan centers on teaching heuristics. After a warm-up discussion, the students read a research paper that demonstrates the effectiveness of heuristics over other more detailed methods in deciding which patients should be sent to the Coronary Care Unit. After studying an easy example of heuristics, the students work in groups to select one specific everyday problem and use heuristics to solve it.

**Take-home message:**
Teaching heuristics is an activity where language teachers can potentially incorporate academic reading with “active learning” by combining students’ daily experiences with research findings acquired through reading.

**Presentation 7 by Mutsumi Inokawa (International University of Health and Welfare): Implementation of an activity of group presentations incorporating discussions**

**Problem to be solved:**
During presentations, although the presenters are active, the audience tends to merely listen passively. In an effort to change this situation, we designed and implemented an activity of group presentations incorporating discussions.

**Brief description of the lesson plan:**
The following was the framework. Groups chose their topic from a list of medical issues. Each group had 25 minutes for
delivering presentations with a news clip related to the topic and discussions. Each student contributed to the presentation and discussion. The presenters later acted as facilitators to encourage interaction among the group members during the discussions that followed the presentations. Following this activity, all students reflected on what they had learned and evaluated themselves on their contributions both during the presentation and discussion through Google Forms.

**Take-home message:**
Their written responses showed that this activity helped enhance students’ understanding of the topics through the presentation and discussion process.

**Presentation 8 by Kris Siriratsivawong (Showa University): Engaging students in the classroom**

**Problem to be solved:**
All too often, students become disengaged in the classroom, daydreaming or falling asleep.

**Brief description of the lesson plan:**
I offer three simple strategies that we, as educators, can use to keep students engaged. The first is to know your students, which means calling them individually by name in the classroom. The second is to ask questions in a style that promotes learning – a.k.a. “pimping” – which means asking questions in a way to reveal gaps in knowledge. And thirdly, leveraging technology in the classroom will more readily engage this current generation of young adults. One such example of how technology can promote active learning is the use of an audience polling system.

**Take-home message:**
Using the 3 simple strategies of (1) knowing your students, (2) “pimping” your students, and (3) leveraging technology in the classroom will help to keep students engaged in the classroom and promote active learning.

**Presentation 9 by Thomas Mayers (University of Tsukuba): Medicine and Me**

**Problem to be solved:**
The main objective of this lesson is to help students overcome their initial reticence to speak English by getting to know one another, developing a sense of professionalism, and learning some medical English.

**Brief description of the lesson plan:**
“Medicine and Me” is a lesson plan designed for the first class of the spring term for first-year medical, nursing, and medical science students. The class takes place in a computer-assisted language learning (CALL) room. The lesson begins by having the students write short answers to questions about themselves and their decision to study medicine. Students are then randomly paired, via the CALL system, and interview each other using the answers they prepared. They then expand their answers to form a video script. As a homework project, students create self-introduction videos using the script that they created in class. Two weeks later, we watch the videos together, the students assess one another, and a prize is given for best video. For homework students have to write short reports about their experience of this project.

**Take-home message:**
From past reports, it is clear that this project, while challenging, fulfilled its objectives. In the words of one student: “I got to remind myself why I had chosen to study medicine, and it motivated me to work harder and study more.”

**Presentation 10 by James Thomas (Keio University): Adopting a flexible approach when teaching EMP**

**Problem to be solved:**
There are many challenges that we face when teaching EMP. The environment, learners, instructors, resources, and learning objectives can all have an impact on our classes and approach to teaching. At Keio University School of Medicine, we try to adopt a flexible approach to teaching EMP and use a variety of different styles and techniques.
Brief description of the lesson plan:
Blended learning and flipped classroom approaches are utilized to form a learning cycle of teaching, practice, and individualized feedback. We have developed an online library of resources to encourage student-centered learning and maximize face-to-face instruction in the classroom. In addition, simulated patients and virtual patients are integrated into the curriculum to cultivate clinical reasoning as well as language acquisition and development.

Take-home message:
Adopting a flexible approach is important when considering the most effective strategies for teaching EMP. Many useful resources are available and can be integrated into a curriculum after assessing the learning and teaching environment and class objectives.

Presentation 11 by Michael Guest (Miyazaki University): Clinical case presentation speed drill

Problem to be solved:
Students need real-time, real-pressure fluency practice in order to better internalize their English clinical case presentation skills.

Brief description of the lesson plan:
This lesson is an information gap activity in which students are required to accurately and quickly convey clinical data to team members until an instructor-made clinical case data sheet containing a total of 30 clinical case categories (e.g., Allergies, Hospitalizations, Current Medications, etc.) is fully completed. The goal is to reinforce students’ skills in presenting clinical case data by having them convey the data within a limited time frame. Ten items have already been filled in on each sheet by the instructor (e.g., Allergies: Eggs) but these 10 pre-completed items will be different for each team member. In order to convey the data so that the entire sheet can be completed, students are placed into 3 rows: A, B, and C, with the matching seating positions in each row forming a team. The task is to convey the 10 pre-completed items from member A to B, B to C, and C to A, quickly and accurately in English, so that all team members can eventually fill in all of the data (30 items). There is a strict 90-second time limit for each conveyance of data – which must be performed only by speech. After the 3 transfers of clinical data are completed, the 3 team members can join up to ask for any remaining or uncertain information until the sheet is fully completed.

Take-home message:
Speed drills can have a place in our classrooms, particularly as a means of helping learners to deliver specific clinical content in real time and under pressure.

Presentation 12 by Takayuki Oshimi (International University of Health and Welfare): Student-friendly journal club presentation format

Problem to be solved:
Traditionally, medical students in Japan do not learn how to prepare for a journal club presentation. Many of them try to translate a whole paper into Japanese and briefly summarize the abstract, figures and tables, which have fewer English words. After the presentation, many of them end up feeling, “I don’t wanna try that anymore!” To make this situation more student-friendly, I would like to suggest that they should include Discussion, Editorial, Correspondence, and Conference Report in their journal club presentation.

Brief description of the lesson plan:
After briefly mentioning the abstract, they should talk about the Discussion section, which describes the interpretation of the results as well as the generalizability of the research. By checking Editorials, which are solicited by journal editors and provide commentary on and analysis of the original article, students can easily grasp the value of the study. To check similar studies, students should check Correspondence articles, which are forum reports consisting of “Letters to the Editor” and “Author Replies” that provide an opportunity for readers to discuss the articles. To make the journal club presentation more intuitive and holistic, I would like to suggest that students find a Conference Report of the article and check the author’s informal comments. This will help them understand the impact of the article on our community.

Take-home message:
By including Discussion, Editorial, Correspondence, and Conference Report in their journal club presentation format, students will be able to feel confident in their presentations and more interested in medical research.
Teaching medical anthropology to future physicians: Content-based EMP for cultural competence, critical thinking, and cosmopolitanism

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Introduction
Since 2012, one-half of the second term English for Medical Purposes (EMP) course for first-year medical students at Akita University has consisted of an Introduction to Medical Anthropology (IMA) sub-course, taught by the author (the other half of the course is an EMP sub-course). The IMA sub-course argues that human disease, health, and healing can never be separated from culture, as these are always cultural. The primary objective of the sub-course, to quote the syllabus, is “to produce more knowledgeable doctors who will be able to think about disease, health, and healing from a variety of perspectives—not only from a clinical perspective.” Critical and analytical thinking are strongly encouraged; the students are not expected to simply memorize facts in preparation for the weekly quizzes and the final exam but to think for themselves and to synthesize the data and arguments presented in the lectures, and in the assigned readings and video materials used in class.

The lectures progress from a general consideration of anthropology and the culture concept (including ethnocentrism and cultural relativism) to more focused coverage of medical anthropology, health, disease, and healing in different cultures, conditions in particular societies, development, applied medical anthropology, contemporary biomedicine, and finally to caring for patients from different cultures. Video materials are used, and reading assignments are given.

The sub-course is congruent with current Ministry of Education (MEXT) medical education guidelines, which call for including (medical) anthropology or sociology in the curriculum. It also reflects the author’s belief that EMP should be about more than preparing medical students to practice medicine in English. This report affirms the value of content-based EMP and specifically of studying medical anthropology for future physicians. It also asserts that studying medical anthropology in English can boost medical students’ motivation and help them to become better doctors—and physicians of the world—in the future.

1. Sub-course scope and contents
The course begins with an introduction to the culture concept, including a discussion of ethnocentrism and cultural relativism, and to the basics of anthropological (ethnographic) research and fieldwork. Next, four essential concepts that can be learned from studying medical anthropology are presented: 1) biology and culture matter equally in the human experience of disease (a biocultural perspective is necessary), 2) the political/economic environment of a region or people is a primary epidemiological factor (it largely determines health risks and available treatments), 3) ethnography can help to better understand the ways in which people deal with disease and suffering (it provides empirical evidence), and 4) medical anthropology can help to reduce human suffering. Many examples are given to support number two in particular, including comparisons of ambulances in Japan and in rural Southern Africa, the health effects of parasitical sand flea invasions in Southern Africa, and a brief consideration of global average life expectancy levels by region and country (which again draws attention to the African continent’s generally poor health conditions).

Throughout the sub-course, a variety of maladies—such as kuru, wendigo (and ICU) psychosis, koro, and the evil eye—are introduced. The last of these is usually of great interest to the students; they learn that the Romans carried divine penis-shaped talismans called fascinum to protect themselves from the evil eye and that this is the root of the English word “fascinate,” and that the belief itself exists in one-third...
of all cultures in the world (if not more). Discussions of such illnesses are conducted in the context of understanding culture-bound syndromes for better cross-cultural (or, human) understanding and not in the way that they might be handled in a sensationalistic television program.

Healing regimes are also comparatively analyzed. These include traditional shamanism (which may involve magic and psychedelic potions), native Maori practices (which may include energy transfers and ancestor appeasement), psychic surgery (which involves illusions of pulling items from patients’ bodies), and contemporary biomedicine (including surgeon culture). It seems that considering these in their cultural contexts, without overtly ranking them in a hierarchy, generally intrigues the students. Moreover, it prepares them—at least to a degree—to face a variety of conditions and beliefs in the future without being shocked into bewilderment by encountering one that makes little or no sense outside of its native cultural environment.

Superstitions are also discussed, as these often relate closely to health. Japanese superstitions, many of which come from China, are particularly interesting for the students to learn about. For example, it has been said for centuries that cutting ones’ fingernails or toenails at night invites evil spirits to attack that person; although blades are considered to have the power to protect one from such creatures, pointing a blade at one’s self is thought to create a small zone of vulnerability. The students also learn that Hina Matsuri dolls originated as paper or clay creations that were used to wash a child’s body. Once they had soaked up all of the ritual impurities and bad luck that they could absorb, they were put into a stream and allowed to float away and disintegrate. This discussion of impurities naturally leads to one about menstrual- and birth-related customs and beliefs, and about placenta burial and also consumption, and eventually back to disease etymology in general.

A discerning look is taken at development, particularly the World Bank’s role in this, and the tendency for the wealthiest countries that control it to pursue development projects in poor regions that are designed to benefit themselves (Japan ranks second in World Bank control voting power, behind the USA). It is explained, for example, that World Bank development policies—which require dangerous and painful structural adjustments—have caused per capita incomes and average GNPs in Sub-Saharan Africa to drop, and the number of people living in poverty there to rise, in recent decades. These discussions are closely linked to human cultural evolution and illness. Finally, the sub-course closes with a discussion of caring for patients from different cultures. This section reviews some of the concepts presented at the beginning of the sub-course (e.g., ethnocentrism and cultural relativism), touches on the role of religion in disease/health ideologies, and presents a number of true cases from Geri-Ann Galanti’s well-known book.

### 2. Sub-course design and mechanics

As there are more than 120 freshmen every year, and since the sub-course comprises one-half of their required EMP course, the sub-course is entirely a lecture-style class which centers mainly on the lecture slides. No copies of these are provided to the students; they are expected to attend each time and take notes (recording the lectures is allowed). About 60 slides are usually used each time, and sometimes more. There is no textbook, but reading assignments are regularly given. These are usually short articles or essays gleaned by the author from newspapers or credible websites. For the 2017 autumn term, nine separate pieces were assigned. An attempt is made to not assign the same piece of writing two years in a row. Video materials are also used: 1) an International Committee of the Red Cross (ICRC) short film on a traditional midwife training program in Liberia, 2) an ethnographic film set in rural Kenya or one in the Bolivian highlands, and 3) Michael Moore’s 2007 film Sicko, which is quite an eye-opener, if not a game changer, for the students (see Wood 2018 for details). These—particularly the first two—are introduced and carefully explained with slides in advance (Sicko has Japanese subtitles).

### 3. Evaluating the students

The grading system is simple: divide the sum of the IMA
sub-course score and the EMP sub-course score by two. In other words, the students do not have to pass both sub-courses to pass the course; a sufficiently high score in one will offset a low score in the other. In the IMA sub-course, a quiz is given at the beginning of class each time (the class meets on Tuesday mornings from 8:50 to 10:20). Each quiz covers the previous week’s lecture (or video), as well as the reading assignment (if there was one). There are ten questions per quiz. Taking regular quizzes helps encourage the students to study regularly and to attend class. It also helps with taking attendance. The 12 quizzes count for 60% of the sub-course score. There is also a comprehensive final exam, complete with an essay section, that counts for 30% of the sub-course score. Finally, attendance is worth 10%. This also encourages the students to not skip class.

4. Educational effects and student receptiveness

Attempts have been made to evaluate the impact of the sub-course on the students, primarily by way of the course evaluation forms that they fill out anonymously twice per semester. Upon being asked in November of 2016 if they felt that the sub-course would benefit them in the future, 76% gave positive responses, 15% did not answer, and 9% gave negative responses (n=118). Thus far, no notable difference in the students’ answers to this question regarding the two sub-courses has emerged (except for a consistently lower percentage of negative responses with respect to the EMP sub-course). This congruity suggests that the students are happy overall with the EMP course, and that “standard” EMP should not be replaced by, but rather augmented by, specialized content-based classes like the IMA sub-course outlined here.

Anonymous student comments1 on the course evaluation forms point to a high degree of satisfaction among many of the students: “The book you introduced to us in class had a wonderful impact on me” (2012). “The medical anthropology sub-course (...) boosted my motivation to become a doctor” (2012). “It was the most stimulating English course I’ve ever taken” (2015). “Your class was very meaningful for me because I could not only study in English but also gain knowledge of medical and general matters” (2016). “It was very fun because of the interesting content; I really learned a lot” (2016). “It was more fun than any other medical school course” (2016).

Limitations of the sub-course stem mainly from the high student number; with smaller classes, or with the help of assistants, discussions could be held, for example. The instructor is also limited by the fact that some students are naturally less interested in the sub-course’s contents, and have lower English ability, than others; as EMP is a required course that the students must pass in order to advance to the second year of medical school, the instructor cannot set the bar too high. Evaluative limitations include the fact that only the mid-term course evaluation forms at Akita University offer instructors the opportunity to create original questions for the students (the end-of-term forms do not). It is possible that students might answer the above question on sub-course benefit differently if asked at the end of the term. Additionally, no follow-up surveys targeting graduates who took the sub-course have been conducted, making it impossible to measure the actual impact of taking the sub-course on the students’ professional lives.

5. Conclusions and Reflections

This consideration of the IMA sub-course at the medical school of Akita University and its impacts on the students, despite certain limitations, affirms the value of content-based EMP, and of studying medical anthropology, for future physicians. It strongly suggests that studying medical anthropology in English can boost medical students’ motivation to study English, and also to study in English, and help them to become better doctors—and physicians of the world—in their professional careers. Finally, it points to the importance of striking a balance between “standard” EMP and specialized EMP such as medical anthropology—the value of which has recently been recognized by MEXT. It is hoped that JAS-MEE will seek a balance between clinical/practical EMP and medical sociology/anthropology-oriented content-based EMP in its own efforts to improve medical English education in Japan in the years to come.

References

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